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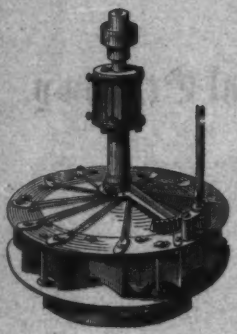

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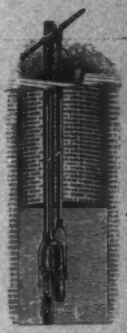

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THE

AMERICAN FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

[ESTABLISHED 1819.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

Sixth Series. BALTIMORE, JULY, 1869. Vol. IV.—No. 1.

JULY.

"Its dark-green hue, its sicklier tints, all fail,
And ripening harvest rustles in the gale,
A glorious sight, if glory dwells below,
Where Heaven's munificence makes all the show,
O'er every field and golden prospect found,
That glads the ploughman's Sunday morning's round,
When on some eminence he takes his stand,
To judge the smiling produce of the land."

Work for the Month.

WHEAT HARVEST.

The wheat harvest will be a matter of chief solicitude until the crop be made quite secure against wind and weather. The most skillful hands should be entrusted with the work of putting it up in the field, that no damage may result from sprouting, or the necessary incidents of exposure in the field for many weeks perhaps, after harvest. See that the bundles are bound firmly in moderate sized sheaves, and well set together, the butts upon the ground, not leaning but upright, with the heads pressed well in, and the cap-sheaves set firmly on.

HAY MAKING.

The timothy crop should be harvested with all the dispatch which may be commanded, as after it reaches the point of sufficient maturity it degenerates rapidly in quality and loses in weight. We repeat what we have given before as sound advice in this matter, as follows; "The proper time to cut herd's grass or timothy is after the seed is formed and is full in the milk. It will then give about twenty per cent. more weight than when it is just coming into blossom, and the cattle will eat twenty per cent. less, and keep in their flesh. And I prefer also to cut it at that stage of its growth on account of the roots being better able to withstand the drought. It should be cut four inches from the ground, as most of the timothy is killed by mowing close and early, before it has come to maturity. I have kept timothy thick and strong in the land six years, by following this method. I have noticed that most of it has died out by once or twice close and early mowing before the grass has come to maturity: if it is dry weather it is sure to die when so cut. I lost a whole field by mowing too close and early, and I consider the four inches at the bottom, of coarse timothy, of little value."

The process of curing timothy consists in getting rid as speedily as possible of the surplus water of the grass, and without unnecessary exposure to the weather. Timothy, when it has reached the proper stage for cutting, will require to be spread but a few hours in the sun. It should be then thrown into well made cocks until it goes through a sweating process, after which it should not be thrown open but will be sufficiently dried in moving to the barns or the mow, on a favorable day.

Red-top and other low land meadow grass should be cut this month. The red-top should be cut when in flower, but has the quality of waiting longer for the scythe without loss than any other cultivated grass. Low grounds liable to be flooded should be cut as early in the month as may be practicable.

MILLET OR HUNGARIAN GRASS.

Either of these will still produce an abundant growth of hay from seed sown now on rich and well-prepared ground. One or the other should be sown, if there be danger of short allowance of hay. Sow half a bushel of seed to the acre, broadcast.

BUCKWHEAT.

Buckwheat is one of those convenient crops that may still be sown even up to the 1st of August. It is, we suppose, quite as valuable as oats for stock feeding, and it is well known how the breakfast cakes well made from its flour excel all other preparations for that meal, to which good butter is a help meet.

Prepare the ground well, as for other small grain. If a large crop is expected the ground must be rich, or made so by such fertilizer or compose as you can command. As compared with wheat, however, or other grain crops, it yields well on poor, light lands. This circumstance, and the late period at which it may be sown, and the short time it occupies the ground makes it, in some sections, a favorite secondary crop.

If cut for hay, while in bloom, it is said to make good provender for milch-cows. The grain is good for hogs, poultry and other stock and for horses it is estimated that two bushels of buckwheat is equal to three of oats.

Opinion varies somewhat as to quantity of seed. A half bushel is, by many cultivators, thought to be enough, though others insist on as much as a bushel. Well distributed, on well-prepared land, it is, we think, sufficient,

To secure prompt germination, the ground must be put in the best order by harrowing and rolling. Plough the seed under with a shallow furrow and put in the fertilizer by the same operation.

THE CORN FIELD.

There remains little that has not been said before that we may now say about the corn field.—According to our ideas of its working, there should be nothing further to be done with it. Such work as must be done must be done with reference to the state of the weather, lest the hot suns of the long summer days do more damage than the work may do good. It is well to work in alternate rows—going over the field thus, that no hill of corn shall have its roots cut on both sides at the same time. Those first worked will have recovered somewhat in this way, before the others are cut.

TOBACCO CROP.

The tobacco crop demands strict looking after during the month. To complete the planting, if not yet finished, is, of course, the first care.—After this comes that operation known as "weeding," which should always be performed, however, when it can be, before the weeds make their appearance. As it is an important part of the work, we call to it the particular attention of young planters. It consists of taking away with the hoe, in the most careful manner, all the surface of the hill in which the plant sits, leaving no foothold for the smallest sprig of crab grass or purslane that may have taken position there. This should be done as soon as the plants may have had time to take root, which will be shown by the starting of the central bud. When the weeding is done, and a dressing of plaster, or plaster and ashes, dropped on each plant, it may be expected to take an early start to make its summer growth. The least rough usage with the hoe will sometimes uproot a plant, and in very dry and hot weather it is sometimes necessary to wait for a rain, so liable are the plants to be killed by any disturbance, at this time, of their roots.

The rows should be worked early and quickly with shovel plough or tobacco cultivator, so that by the time the plants begin to spread pretty well across the rows the ground may be perfectly clean and mellow.

All tobacco worms that make their appearance this month must be destroyed, to prevent their increase. Turkeys and other poultry will keep under any moderate quantity if the tobacco lot be near the poultry houses. Over large fields, flocks of turkeys should be driven regularly, and will destroy very effectually the young worms while the tobacco is small.

FALL POTATOES.

Keep the crop of late potatoes worked well through the month, and until blossoms show themselves freely, when the working should cease, leaving them perfectly clear of weeds.

BROADCAST CORN.

Corn may still be sown broadcast, to be used for green fodder during the drought of August and September.

RUTA-BAGA TURNIPS.

An acre of roots of some sort to every ten head of cattle makes a valuable addition to

the winter provision for stock. Ruta-baga turnip, in the absence of beet, carrot, &c., makes, at very cheap rate, a supply of this sort, and should be prepared for now, by putting land in condition for sowing from the middle to the close of the month. The ground must be worked deeply and made rich with superphosphate, in the absence of home manures.

SALT FOR STOCK.

Let stock have access to salt during summer. It is well to have rock salt at hand, where it may be taken at pleasure.

The Vegetable Garden.

JULY.

While the chief work of the month is to keep growing crops well worked and clear of insects, there are several important crops now to be planted.

Cabbages.—Set out plants for winter use in ground well manured and deeply and thoroughly cultivated. Allow no manure from hog-pens where cabbages are planted.

Celery.—Supposing plants to have been provided by sowing seeds in May, the main crop is to be set out within this month. Ground from which an early crop has been taken may be used for the purpose. It should be rich, moist, and in open exposure. Mark out the trenches by line, ten or twelve inches wide, and leave a space of three feet from trench to trench. Dig each trench the depth of a spade, laying the earth out equally on each side between the trenches. Lay three inches deep of very rotten dung at the bottom of each trench, then pare the sides of the trench and dig the dung and parings, with an inch or two of the mould at the bottom, incorporating all well together, and put in the plants. Previous to planting trim the tops and roots, taking off long straggling leaves, and the end of the roots.

When plants have been kept properly thinned and free from weeds, they will be short and stubby, and may be lifted with balls of earth to the roots, which being undisturbed in planting will insure their growth. They should be well watered at planting and shaded for some days.

White Turnips.—Sow a small bed for early use; main crop not till August.

Beets and Carrots.—May be planted still and make good roots.

Mangoes and Cucumbers.—Plant seeds of these for pickling.

Cauliflowers.—Put out plants of these for winter supply.

Small Salading.—Sow seeds every ten days for succession.

Radishes.—Sow seeds the last of the month for fall use.

Seed Plants.—Gather all seed plants as the seed ripen, and lay them to dry in a safe place.—When dry enough, get the seed out and put in paper or cotton bags, carefully labeled, and hang in a safe place.

Herbs and Medicinal Plants.—These, as they come into flower, gather and dry in the shade.

The Flower Garden.

Annuals.—Plants of late sown annuals, as Balsams, Coxcombs, Amaranthus, China Asters, may be still set out. Take up with trowel and water till they begin to grow, keeping the soil stirred about them.

Biennials and other Flowering Plants.—Such of these as were not heretofore planted, should be now set out in beds and watered and shaded till they root. Of these are Wall-Flowers, Sweet Williams, Canterbury Bells and Gilliflower. Let them remain in these beds till fall, when they are to be finally planted where they are to bloom.

Pinks.—Pinks of all kinds should be propagated this month by layers or pipings.

Flowering Plants.—Such as need support should be tied up to neat stakes. Cut off stems that are done blooming unless wanted for seed. Peg down Petunias and Verbenas.

Hedges—Should be clipped in damp or cloudy weather.

Gravel Walks.—Sweep and roll weekly.

The Fruit Garden.

Examine budded and grafted trees and rub off buds that may have started from the stock.

Pick off punctured fruit; gather all that falls, and have it destroyed. This is one of the most effectual modes of getting rid of that very destructive little enemy, the curculio.

Large quantities of wasps, ants and other insects that destroy the ripening fruits, may be trapped by hanging about the choice fruits vials of sweetened water.

Cut off suckers from the roots of choice trees. Cherries, Plums, &c., may be budded this month. Strawberry beds should be cleaned out and no runners allowed to grow except where new plants are wanted.

For the "American Farmer."

How to Preserve and Increase Manure.

The first requirement is to have a proper manure yard convenient to the stables. As many of our farmers may never have had an opportunity to see one, we will try to describe how such a yard ought to be built. The location has to be near to the stables, so that the manure can be wheeled out conveniently every morning. The bottom of the yard has to be paved either with rock or brick, with a slope from all four sides to the middle. In the middle there has to be a tank built of brick, in cement. The object of this tank is to hold the liquid manure. It has to be covered with two-inch planks. In the tank a pump is inserted. The most desirable and cheapest are those made of two-inch planks, three inches in the clear, held together by iron bands and wooden nails. The yard having been prepared, the next thing is to cover it, to prevent rain from saturating the manure and the sun from evaporating it. When ready for use, first cover the bottom with refuse dirt, trash, etc., at least one foot thick, then deposit the manure—cow and horse manure mixed—also one foot thick, and thus alternately continue until the heap is five feet high. Commonly, the layers are placed horizontal, but it is preferable to make them sloping, about two feet higher on one side, sloping down to nothing. The advantage derived from this mode is, that the fermentation takes place easier and more uniform, the pressure not being so heavy. In this way any dirt, trash, leaves, etc., etc., can be converted into the best kind of manure. Every three or four days the liquid manure has to be pumped over the manure heap, to keep it from dry rot. Sheep manure is better kept to itself in the sheep shed, where it ought to be well mixed with straw and other bedding. Although by this mode the manure will be increased considerably, still it is not sufficient to preserve all the manure needed on the farm. Consequently, we have to look for other resources. One of them at our disposition is to make "compost." For this purpose, good soil, muck, leaves and lime or marl are required. The proceeding is as with the manure, viz: to deposit the layers of the different substances, alternately, marl or lime to be laid between *every* two layers. The compost heap has to be kept moist by applying water or liquid manure. Every three months the pile has to be worked over and well mixed. If muck is used, it ought to be thrown up and exposed to the air for at least three months before it is used for compost. Besides the manure we have mentioned above, we have the liquid manure gathered in the tank by the stable.

This manure is excellent for any crop. If applied to meadows, pastures, or wheat, during the winter, it *can* be used in its original state, although better if diluted with water. If desired for grain crops in the spring, or if applied in the summer, it MUST be mixed with water. If not, it will kill the plants. Liquid manure has gained considerable ground amongst the higher class of agriculturists in Europe.

There is another fertilizer, found on many a farm, but hidden on many more—it is *marl*. It is the cheapest fertilizer we can apply.—Brought on the land, well dissolved and pulverized, it will produce superior crops on *any* land. True, if not sustained by manures, or the land seeded at once with clover, it will impoverish the soil. I have excavated it as deep as twenty-seven feet, having to remove six feet of soil from the top, and still found it to pay *very well*. I am convinced that more is present in a great many localities where it is not expected, and I would advise farmers to bore for it, to ascertain if it is to be found on their farms. If found, the value of the farm is increased over one hundred per cent.

Before closing these remarks, let me advise farmers never to sell a load of straw or hay, but to keep sufficient stock to consume it on the farm. It is easier to take your produce on foot to the market, than to haul them on the wagon, and to produce your manure on the farm, than to buy it and run the risk to get worthless stuff. Besides, no *bought artificial* manure is equal to farm manure. This is acknowledged even by Professor Liebig, who has tried everything that chemistry can do to produce substitutes. From the above advice I exclude farms in close proximity to cities where hay and straw command a high price, and where *good* manure can be procured plentiful and cheap. In such localities, a farmer is justified in selling his hay and straw and buying manure. The expenses of hauling are far less than the profits derived from such a proceeding. L. A. HANSEN.

Green Crops and Irrigation.

Editor of American Farmer:

The perusal of the interesting account of the improvement of a barren sand by camp sewage at Aldershot, England, which is copied from the London Times into the May number of the "Farmer," suggests some remarks on the irrigation of our poor Southern sands and clays, and the growth of green crops for forage purposes.

Before undertaking the work of making fertile ninety-five acres of remarkably sterile ground, Mr. Blackburn, whom the Times characterizes as "a Scottish gentleman farmer of great experience," had the good sense to have the soil analyzed, and found that he had to deal with ninety-five per cent. of silicious sand, three per cent. of a poisonous proto-oxide of iron, and two per cent. of the "vegetable refuse of withered heather." No alumina, lime, potash, soda, magnesia, sulphuric or phosphoric acid was found.

So perfectly did water extract the fertilizing elements in the solids, that one hundred tons of the latter, deposited in a pool made for the purpose, applied to an acre, and "covering it to the depth of nearly two inches with solid matter, all turned in with the plough, and planted with potatoes, produced less than an average of the acres tilled only with the sewage [liquid] manure." Mr. Mechi has also demonstrated, from long experience, the value of liquifying common stable manure, and then distributing it by a small steam engine through iron pipes and elastic hose, over his fields. Mr. Blackburn uses a ten horse power engine —a machine whose cost need not frighten a well-to-do farmer anywhere. Southern farmers already use a large amount of commercial fertilizers; and it is a practical question of great moment how to apply them to the land to the best advantage. Such as will not dissolve in rain water in a few weeks, have small power for the first crop.

Every farmer must know that showers of liquid manure at the right time, and in the right quantity, will make him, to a large extent, independent of poverty of soil and of "seasons." At first view, this control over the grand elements of fruitfulness in our sunny clime appears almost too good to be practicable. Why not? It is a stubborn fact that nature drops on every acre of our poorest land between three and four thousand tons of water from the clouds every year. What more is needed to irrigate an acre in grass, corn or turnips? Water for irrigation is not lacking. Does the reader ask, "where shall we get manure to begin with, and produce forage crops?"

If our home resources are sadly short, or defective, a judicious investment in fertilizers is wise and proper. This done, more money can doubtless be realized from grass or other green crop, than any staple like wheat, tobacco or cotton. The farmer who produces butter for sale, from grass and hay, sells not an ounce of nitrogen, potash, sulphuric or phosphoric acid, in a year. By not ploughing nor hoeing his grass fields, he loses no mould nor sediment by washing rains. Gullies and galled places will never disfigure or injure his farm. His land will steadily increase its productiveness, first, because he sells in butter nothing but condensed air; and secondly, because water that rises from the deep subsoil by capillary attraction up into the roots of grass and other plants, brings with it fertilizing salts in solution, which remain in the droppings of the animals that consume green crops. Practically, manure augments on the farm from year to year, just as an old field turned out to rest improves at the expense of the earth below, and the atmosphere above it. Elements which are to-day disorganized air, water and earthy salts, may to-morrow be organized in the cells and tissues of green herbage, eaten by dairy cows: and in twenty-four hours appear as most wholesome and nutritious milk. Butter and cheese extracted from this milk are equal to the best beef for supporting the human system, which it takes from two to four years to produce. This quick conversion of air into human food by green crops and dairy husbandry, explains to the reader how it happens that the production of grass, butter and cheese, in the State of New York, drives beef-making, sheep-husbandry, the rearing of fine horses for the rich in many cities and villages, and even wheat culture, far into the background. I know from long experience and observation that Southern showers and sunshine will produce, other things being equal, nearly twice the grass or weight of corn forage per acre, in twelve consecutive months, that can be grown in my native State, N. York. Hence, Southern farmers have natural, climatic advantages to greatly excel in *feeding* as well as in *clothing* mankind.

Diversified agricultural industry, supporting and supported by a diversified mechanical, manufacturing and mining industry, is what we need. Green crops and irrigation will give us the quickest possible return with profit on all of our farming and planting capital. Time is a material element in all business operations. These should be so well understood as steadily to increase the fruitfulness of all cultivated land, that capital in land may be neither dead nor dying, but growing in amount as fast as children can grow up in any country. Defective financiering is written in legible letters on every acre of our unproductive old fields. In the best days of Rome it was a high honor to make two blades of grass grow where one grew before. Adopt this policy in the South, and our farms will at once quadruple their market value

D. LEE.

Stagnant Water Causing Abortion in Cows and Mares.

Thanks for your reply to my query as to abortion in cows in your impression a fortnight ago. I now consider I can trace my losses to stagnant water, which I otherwise never would have thought of.—*Meigle.* [We are glad to have been able to afford you a clue to the causes which have produced such losses amongst your cows. Stagnant or foul water is injurious to all animals. It causes blood poisoning, and thus leads to many febrile complaints. It brings on abortion in other animals as well as in cows. Two winters ago, three valuable mares, belonging to a somewhat careless, untidy farmer, slipped their colts shortly after Christmas. These mares had been tolerably well kept, and not too hardly wrought, but they had been watered for several weeks at a pool, by the side of which a large manure heep had been foolishly placed, and into which the highly colored organic matters freely found their way. Some ewes watered from the same pool cast their lambs; whilst another lot of ewes kept two fields distant, managed in exactly the same way, but enjoying a purer supply of water, carried their lambs to the full period. Since better care has been taken to prevent the water supply being contaminated by the manure heap, neither mares nor ewes have suffered from abortion. Similar cases have doubtless occurred in the experience of many of our readers.—*Vet. Ed. North British Agricul.*

Working Bulls.

As we keep our bulls in this country, there is a vast amount of power that runs to waste which would be very willingly laid out. We might severely tax the strength and endurance of any bull, not otherwise overworked, and he would be the better for it—a surer stock-getter, and a sire of finer animals; and besides, which is after all the greatest advantage, we should thus be able to keep bulls until they are really aged. We need hardly argue the question, if a reasonable amount of labor is an advantage to the bull. It is a recognized fact, that a due amount of exercise is essential to the highest wellbeing of all animals, and especially those used for breeding. If this exercise be taken in hard labor, provided it be not excessive, the experience of thousands of horse owners, and of many bull owners, in this and other lands, shows it to be entirely beneficial. The farmer, then, is doubly the gainer. He has the labor of the animal, and the bull is better for it. Few farmers keep more than one bull, and hence it is that they are not more in the habit of working them. A bull may be worked alone with a suitable harness in a cart or wagon, and before the plough, harrow, or stone-boat. He is deliberate in his movements, but powerful, and a single bull will often do as much ploughing as a pair of cattle. We have seen a bull turn a 12-inch furrow eight inches deep in sod with perfect ease, and walk as quickly as a "smart" pair of oxen. He must be put early in training, taught to be guided by lines attached to the nose ring, and put early at such labor as he can do. We do not place the bull or any of his kindred high in the scale of intelligence, but very high in a scale of animals with which habit becomes second nature.—Cattle are not very easily taught, but when taught, may be relied upon. Bulls are usually dangerous, because so little exercised, and never fairly subjugated. To *subjugate* a bull he must emphatically be brought *under the yoke.* There is a great difference in the disposition of bulls, and while we advise no one under any circumstances to trust a bull beyond immediate control, we fully believe that nine-tenths of the young bulls in the country, if put to work, would be docile and useful, and might be kept for ten or fifteen years, greatly to the improvement of our stock.—*American Agriculturist.*

From Journal of the Farm.

Fifty Per Cent of Clear Profit.

In the memory of living men the virgin soil of the "Hawfields" produced ten barrels of corn per acre. In the boyhood of middle aged men, the same land produced five barrels of corn per acre. Now, according to the concurrent statements of numerous farmers, one barrel of corn per acre, worth $5.00 to-day and $3.00 at the heap, is an average corn crop; and the average cost of production, according to the same concurrent statements of farmers in this neighborhood, is $7.50 per acre. Nothing more need be said to prove that our system of farming is an absolute and most disastrous failure, which must change or the land must change owners; and some hints as to how this change may be speedily and surely effected, are given in the following paper, founded upon actual experiments of my own, or coming under my own observation; and I assert without fear of contradiction that by following the plan here proposed, any farmer may increase his clear profits 50 per cent., and increase the fertility of his land 25 per cent. each year.

The causes of the rapid and alarming failure of our lands are numerous, and may be summed up in general terms, into two wants, namely, want of pains and want of brains—but the specific cause is the *culture of corn*, in straight rows up and down the hills. The culture of corn, *at best* is very severe on land, exposing it to the suns and floods of August—but as practiced here, without manure, and without a hillside ditch, it has produced the results already stated—namely, lands that 75 years ago were very productive are now part in the bottom of Haw River, part grown up in broomstraw, and the part still in cultivation produces corn worth $5 per acre at a cost of $7.50 per acre. Now any farmer who will quit corn, except as a cleansing crop, or upon highly improved lots, and who will use brains and pains and Baugh's Phosphate on small grain and clover, and more brains and more pains on root crops, with stable manure and Baugh's Phosphate alternated, will find his net profits increased 50 per cent., and his land rapidly improved. To prove this to the satisfaction of the most skeptical Rip Van Winkle. I need only say, that a bushel of potatoes has always been, is, and will always be equal in value in the market, to a bushel of corn. I never knew in this region, of more than 75 bushels of corn being made to the acre, and that was on a highly manured town lot; and the average yield as already stated is not above five bushels per acre, worth $5. I raised on an old field the first time it was ever manured in the memory of man, 500 bushel of potatoes per acre, and Col. Wm. Bingham did the same on an ordinary new ground. The same manuring might perhaps have produced 50 bushels of corn, worth $50, while the potatoes were worth $500, showing a difference in favor of root culture of $450, per acre. Further, a bushel of ruta baga turnips is worth more in Wilmington to-day than a bushel of corn, and Major Lynch has made 500 bushels of turnips per acre. And further still, the potatoes and the turnips can be raised on the same acre, the same year at a cost in labor and manure, of not more than $75.

These statements may seem extravagant; but I repeat, that I and Col. Wm. Bingham have both raised the potatoes, and Major Lynch has raised the turnips.

Wheat has been an utter failure in this section for the last five years, the average yield being less than two and a half bushels per acre; but with a fertilizer, ten bushels per acre may be safely counted on. Wheat must enter as an important element in any intelligent farmer's system in this region, but never without a fertilizer. It requires but little labor, it leaves the land exposed but a short time to sun and flood; and as a foundation stone of root culture, the straw and the succeeding crop of clover hay, furnish food to winter cattle on, at almost no cost at all, and the cattle in their turn furnish manure for roots. On wheat, $10 per acre in Baugh's Phosphate will make ten bushels, where only two bushels and a half would have grown without it; five bushels will pay for the manure and have two and a half bushels, worth $5 of clear profit the first year, being 50 per cent. on the money invested, and 100 per cent. on the previous net yield, with the same labor. The same $10 in Phosphate that made the wheat is a perfect specific for red clover. The first crop of this clover is worth in market or for home consumption $15, in clover hay, a profit of 150 per cent. on the money invested the year before and already paid in wheat, and the second crop turned, (never pastured) will, with $10, in phosphate again make fifteen bushels of wheat, showing an increased productiveness of 50 per cent.

Oats cannot be cultivated as a money crop; but if one has area enough, as is always the case with us, they must enter into the system as furnishing the cheapest and best feed for horses and the cheapest and best meal for mixing feed for milch cows. As land should not be required to work without being fed, less frequently indeed, but as regularly and as carefully as man or beast; in plainer English, as no seed should be put into the ground without special manuring of one sort or other, I would apply 250 pounds of phosphate to oats, which will pay for itself in oats, and pay 100 per cent. in the succeeding clover crop and improve the land 25 per cent. in furnishing a second crop to be turned; or in buckwheat with 100 pounds additional per acre of phosphate it will pay 100 per cent. the same year. This buckwheat can be sowed while the oats is in the shock by having the rows straight and wide apart and moving the shocks upon the ploughed ground after a section of the buckwheat is put in. The buckwheat can stand in the shock till after wheat is sown, and then threshed in the field, and the straw furnishes the litter for potatoes that can be moved rapidly, and that no wind will blow away as it does leaves.

The cow enters as a very important element into this system of farming. Where there is a range, as is generally the case with us, a cow worth in beef, hide and tallow $20, can be raised with 50 cents worth of salt; and if her manure be considered, she can be raised at a good profit in manure and then sold for $20 of clear cash profit. She will live in ordinary range in summer, and in winter she will live without shelter or wheat straw, and if she never dungs on less than six inches of litter, the amount of manure made is astonishing, which manure in its turn insures root crops,

Hogs cannot be raised on corn at less than $15 per hundred, and are worth in market but $10 per hundred. On potatoes the ordinary stock of hogs can be raised at $5 per hundred of actual cost, (I fattened my hogs on potatoes last fall and know whereof I affirm), and if the potatoes are exchanged bushel for bushel for corn, as Dr. Mebane and Major Lynch did, the cost of pork is still further reduced, as a bushel of corn, is worth only a bushel of potatoes in the market, is worth two bushels of potatoes *in a hog*. What can be done by improving our stock, I am not prepared to say; but it is the generally received statement that the feed which makes 200 pounds of pork from the ordinary hog, will make 300 pounds if fed to the improved hog—and this improved hog is now offered at our doors at Pennsylvania prices, by Messrs. Jenkins and Skiles, of Thomasville, N. C., with whom it will pay any live farmer to correspond.

I have already indicated what can be done with roots and stable manure, close to the barn-yard. Every one may elaborate the idea to suit himself; but I have reached 500 bushels of potatoes on old fields without litter, and *with* litter, deep culture and heavy stable manuring alternated with not less than 1000 pounds of Baugh's Phosphate to the acre—2000 pounds would be better—I feel assured from actual experiment, that a spring crop is certain, worth not less than ten times what the same treatment would make in grain, and a full crop, held till late in the spring, is worth still more. Ruta baga turnips produced 500 bushels per acre, they keep till May and would net now in Wilmington $1 per bushel. The mangel wurtzel beet should receive attention. It is very fine for hogs or cattle, either raw or cooked. The books all say that 500 bushels per acre is a moderate crop, and speak of a 1000 bushels per acre. My own experiment indicates 500 bushels with 1000 pounds of Baugh's Phosphate, and Major Lynch's experiment indicates the same yield with half as much Phosphate. This crop possesses one very great recommendation. It runs through the whole season, as the turnip does in England, and so will always produce a fair crop, while the potato and turnip, running through but half the season, are liable to be cut off by drought.

RO. BINGHAM.

Mebaneville, N. C., April 15th, 1869.

Iowa plants every three years a forest of 5,000,000; within considerably less than half a dozen years 25,000,000 forest trees have been planted and are now growing in the northwest. It's good news that the American mania for tree destruction is abating in any part of the country.—*Ex.*

A wealthy gentleman in New York died of the glanders Tuesday. He caught the disease from a favorite horse. This is the fourth death of a human being from glanders since the organization of the New York Board of Health.

From Cantor Lectures.

Varieties of Food and their Nutritive Value.

After furnishing several tables, designed to set forth the chemical composition and the nutritive value of the chief articles of food that we eat here and in Europe, the lecturer proceeds to say that—

Primarily, all our foods are derived from the vegetable kingdom, for no animal has the physiological power of assimilating mineral elements and forming them into food. What we may yet do by means of chemical agencies in the laboratory is another question; but within our own bodies there is no faculty for such conversion. As I shall hereafter explain to you, our functions are of an opposite kind. We are destructive creatures, not constructive. It is our province to pull down what the vegetable has built up; to let loose the affinities which the plant has brought into bondage, and to restore to inanimate nature the matter and cosmical force which the growing plant had taken from her.

Foremost, therefore, of our foods are those which come at once from the vegetable kingdom; and of these the cereals are the most important, as wheat, barley, oats, rye, maize or Indian corn, rice, millet or durra, and Guinea corn.

Wheat.—Different species of this grain are cultivated, but the most common in this country is *Triticum vulgare*, of which there is a summer and winter variety.

The grain varies a good deal in composition according to season, climate, and soil; but, as a rule, the wheat of Southern climates and warm seasons is richer in gluten, and of harder texture, than that of colder climes. They are then called stronger grains, although the latter, from their being softer and kinder, give a larger proportion of flour. Some of the hardest varieties of wheat, as rivets, are used to strengthen the flour of new grain, which is always unmanageable, and to improve that of bad seasons and of damaged quality.

The structure of the grain is like that of all the cereals; there is an outer siliceous and woody covering which is altogether valueless as food; then there is a layer of rich nitrogeneous matter containing a digestive body called cerealine, and within that is the flour, which forms the great bulk of the seed.

When ground whole, it forms brown meal, which is rarely used in England at the present time, although it was the common food of our forefathers, and even now is much employed in Westphalia to make the dark-colored bread called pumper-nickel. It contains from 5 to 12 per cent. of indigestible matter, in the form of bran, the removal of which, according to Liebig, is only a refinement of luxury.

The practice at the present time is to bolt or sift the ground meal through sieves, or silks, of different degrees of fineness, and thus to remove the coarser bran. The products have different names in different places, and have also different values; but generally 100 lbs. of wheat will yield from 78 to 80 parts of good serviceable flour. The other products are about 2 parts of specks, or tails, or tippings; from 2 to 3 parts of sharps; about 3 of fine pollard; from 3·5 to 6 of coarse pollard; and from 4 to 10 of bran. The relative wholesale values of these are about as follows:—

Vegetable Foods.	lbs. per bushel.	Price per bushel. s. d.	Price per 20 lbs. s. d.
Fine flour	56	10 0	3 7
Seconds ditto	56	7 9	2 9
Sharps	26	2 0	1 6
Fine pollards	18	1 0	1 1
Coarse ditto	14	0 10	1 2
Bran	12	0 9	1 4

Seconds flour is practically the best for domestic use; and of this there should be at least 80 per cent. obtained from the grain. Attempts have often been made to increase the produce; for as the bran contains a good deal of nitrogenous matter, and is, moreover, rich in fat and saline substances, it has been thought wasteful to remove it; but the experimental researches of Poggiale, the learned professor at Val-de-Grace, have shown that at least 50 per cent. of the bran is perfectly indigestible, and may be passed successively through the bodies of four or five animals without undergoing change. It, moreover, acts as an irritant; and, by hurrying the food through the alimentary canal, is very likely to cause waste. Those who labor hard, as railway navigators, invariably choose the whitest bread for food, believing that it is not only more digestible, but it is stronger, and will enable them to do more work. Without doubt, however, there is room for improvement in the treatment of flour, and in the complete utilization of its several constituents. M. Mege Mouries has invented a process whereby the outer skin only of the wheat may be removed, and from 86 to 88 per cent. of flour realized. The process was examined in 1857, and reported very favorably of by

Dumas, Pelouze, Payen, Peligot, and Chevreul, but I am not aware that it has come into use.

M. Mege Mouries also directed attention to the fact that the bran contains a portion of very soluble nitrogenous matter, cerealine, which is of the nature of diastase, and has the property of dissolving starch. This, no doubt, might be utilized by treating bran with warm water, and then using the water in the manufacture of bread.

The nutritive value of wheat is shown in Tables No. 3 and No. 4; and although the average amount of gluten is there set down at about 11 per cent., it ranges from 8 to 15 per cent.—the largest quantity being found in the wheaten flour of India, Egypt, South America and the South of Europe.

It appears, too, that the quantity of gluten, as represented by nitrogen, increases with the coarseness of the flour, and so also does the amount of mineral matter.

TABLE V.

Percentage amounts of Nitrogen and Mineral Matter in the different Products of the Mill.

	Nitrogen.	Min'l matter.
Fine flour	1·70	0·71
Tails	1·86	0·99
Fine sharps	2·21	1·89
Coarse ditto	2·58	3·80
Fine pollard	2·44	5·50
Coarse ditto	2·42	6·50
Bran	2·39	7·00
Average in whole grain	1·82	1·62

The starch and sugar amount to about 70·5 per cent., and the fat to 1·7; so that the carbonaceous is to the nitrogenous as 6·7 to 1, which is a good proportion.

The tests for a good flour are its sweetness and freedom from acidity or musty flavor; and its nutritive value, as far as gluten is concerned, is estimated by the process of Beccaria, who discovered gluten in wheat more than a century ago. A given weight of flour (say 500 grains) is made into a stiff dough, and is carefully washed by tender manipulation under a small stream of water. The gluten remains, and when baked it expands into a clean-looking ball, which should weigh, when thoroughly dried, about 54 grains.

Of all the preparations of flour, bread is the most important. I shall hereafter describe the process of making it, but I may here remark that it should not contain more than from 36 to 38 per cent. of water, and the other constituents, excepting salt, should be the same as of good flour.

In practice, 100 lbs. of flour will make from 133 to 137 lbs. of bread, a good average being 134; so that a sack of flour of 286 lbs. should yield 95 four-pound loaves. The art of the baker, however, is to increase this quantity, and he does it by hardening the gluten through the agency of a little alum, or by means of a gummy mess of boiled rice, 3 or 4 lbs. of which will, when boiled for two or three hours in as many gallons of water, make a sack of flour yield 100 four-pound loaves.—But the bread is dropsical, and gets soft and sodden at the base where it stands. A good loaf should have the following characters:

Kindness of structure—that is, not chaffy, or flaky, or crummy, or sodden; and sweetness to the palate and to the smell.

Wheaten bread is best eaten on the day after it is baked, for new bread is difficult of mastication, and still more difficult of digestion, because of its gummy nature. When it becomes stale, it does not really get much drier, but it undergoes a molecular change, which may be restored by heating the bread in a closed vessel to a temperature of 212°.

Wheaten bread is preferred to all other varieties of bread, because of its sweetness, and because it may be eaten alone. The nutritive constituents of it are in the same proportion as in wheat—namely, as 1 to 6·5, and a little more than 2 lbs. of bread will supply the requirements of the system; although, as I shall hereafter explain, it cannot be used alone without loss of health and strength.

Starting an Apiary.

BY N. QUINBY.

Some one writes: "Why not tell people who have never kept bees how to start?" This is what I have been doing for the last fifteen years, and now there is a class advanced to "Fourth Reader," and anxiously waiting for the "Fifth." These must be kept along, and at the same time the primary class duly cared for. The first thing for beginners to do is, to procure some *reliable* work on the natural history and management of the bee, study it thoroughly, and come to an understanding, if possible, of what a swarm of bees will do under all circumstances. There is very much spurious teaching and miserable guess-work in instructions concerning the apiary. The man who writes without experience of his own, giving only what others have said, will copy an error as readily as truth. Or some-

times a person interested in some particalar point in a bee hive will so distort the truth that it is hardly to be recognized. When a correct knowledge of the fundamental principles of bee keeping has been acquired by careful study, the next thing is to get a hive or two of bees; if in movable combs, all the better. Obtain them, if possible, of some reliable person, one who knows what he is selling, and at the same time will not take pay for a worthless article. Bees in the box hive are more uncertain than other stock. No man can guarantee the future prosperity of any hive after it passes beyond his control. In purchasing stocks, reject the very heavy, and very light. A large number of bees is more desirable than heavy stores—especially at this season of the year. Locate them on the summer stand at once. If moved afterward, let it be for two or three miles. Moving short distances in the apiary is bad. Place the stands six to ten feet apart. Recent observations in regard to the spread of diseased brood dictates a greater distance between stands than formerly recommended. Provide hives for the swarms, and if you have not already movable combs, with proper study you should by this time be sufficiently well informed to desire them in some form. I will not now recapitulate the advantages of movable combs, nor describe the method of transferring combs, but will say it is a paying investment as soon as the advantages are comprehended.

That the tyro may have confidence in his operations among the bees, he may want to keep them from his face and hands—from his face by a bee veil—from his hands by thick woolen or rubber gloves. Any one who expects to do much among bees, should learn to handle things "without mittens," until he finds out that a bee sting is not "killing." After preparing a veil according to the directions referred to, punch the pith out of a piece of elder or other pithy wood, ten inches long, or bore with a slender gimlet through a suitable stick of wood, and insert this tube in the wire cloth opposite the mouth, by which it is to be held when it is desirable to use smoke to pacify the bees. Hard wood, nearly rotten, sawed or split into pieces an inch square, makes the cheapest smoke. Have it thoroughly dry, ignite one end, and blow the smoke in any desired direction on any demonstrations of anger.—*American Agriculturist.*

Diseases of Hogs, etc.

Lebanon, Kentucky.—Rev. Thomas C. Clelland thus gives his experience: Millions of dollars are lost to this country annually by what is called "hog cholera." Nine-tenths of this amount could as well be saved as lost. The following facts are the result of long experience and close observation, carefully compared with the experience of our most practical and successful farmers. I readily admit that there are some diseases that swine flesh "is heir to," whose surest if not only remedy is in prevention; and sometimes even this is impossible.

Pleuro-pneumonia is induced in hogs by sleeping in the dust and wet straw, and by close confinement, followed by sudden exposure. A friend lost his stock hogs by shutting them out from their warm beds in March. Let their beds be warm and changed frequently during the winter. If this disease makes its appearance, the best thing to do is to scatter them as widely apart over the farm as possible. Some persons have kept their sick hogs on a dry lot, with not a drop of water, with apparently good effect. If you are willing to "count the cost," call in your family physician and tell him to prescribe just as he would were you the patient. Make the prescription in the form of a pill, turn the patient upon his back and drop it in his mouth and close the jaws an instant, until the pill is swallowed. I have known many instances of a speedy cure where all hope was lost. I believe that it remains for science to disclose the fact that this, and all other similar diseases, either in man or beast, are the result of animalcule or cholera fungi, invisible to the naked eye.

Worms and lice.—If other diseases slay their thousands, these slay their tens of thousands. We clip the following from a public journal:

"The writer having for several years sustained a heavy loss by hog cholera, has applied his mind to discover the cause and cure of the same, and now thinks he has gained the victory over the great enemy. By examining the carcasses after death I find they contain an incredible number of worms, and also of lice on the body. After making this discovery I experimented as to how the lice and worms could be exterminated in time to prevent an attack of cholera. The lice were easy to drive with coal oil; to kill the worms I steeped the herb "Jerusalem oak" in hot

water until the liquor was very strong. I then mixed corn meal and fed the hogs while in health, which killed the worm before the cholera set up in the system."

No doubt worms and lice, nine times out of ten, are the cause of hog cholera. But I object to the use of the remedy. Never use coal oil. It will "drive the lice," but will not kill the nits; besides, it is very injurious to the skin, and often kills very young pigs. Soap-suds is just as effective, and far more healthy. Copperas is a far better anti-worm medicine than "Jerusalem oak," besides being a fine tonic and appetizer. This, mixed with ashes, and salt—another excellent vermifuge—will prevent worms and give tone to the system. The best remedy for lice is grease and tar in equal parts stewed together, mixed with a very strong decoction of common tobacco. One application of this will last six months; while warm apply with the hand or mop tied to a rod. Change their beds, and if you have any old tobacco stems let your hogs sleep on them. Lice will kill hogs that are perfectly fat, by getting into their ears, eating into their eyes, and very often prevent hogs from thriving, where they do not kill them outright. The owner wonders why his hogs do not fatten. If you see nits shining thick about the neck and flanks, and great lice crawling all over the body, apply the above remedy; it will save you a barrel of corn to each hog or increase the amount of weight equal to its value. Last year the writer had a sow with seven pigs; I weaned her pigs; all but one died with lice, and that one I saved by washing it in soap-suds. The sow did not gain a pound in a week; she was restless and wild until I applied grease and tobacco, when she became tame and began to fatten finely. Two years since a friend told me he was losing all his hogs with the cholera; two or three died each day. I asked to see them; they stood with their heads down, eyes sore, heads swelled, &c. As they were too weak for the application of tobacco, I advised a bath in strong, warm soap-suds. This would kill the present crop of lice. He saved every one.

The model farmer of our county told me he had lost several hogs. He found that, in cutting in two the smaller bowels, sometimes he would kill five or six worms. Another friend was losing his little pigs; he found their ears full of lice; otherwise, perfectly fat and healthy. The most successful breeder of swine in this State gave me the result of sixty years' experience:

I prefer my pigs should come in the middle of February. I prepare a long row of square rail pens, one to each sow, fronting south, just high enough for her to stand under; the eve of her shed to reach the ground on the north side, to keep off cold winds. I fill the bottom of the pen with good dry straw, and train each sow to wait before her own door for her regular rations. I never let my sows with young pigs run on green clover, rye, or oats. Wheat or blue grass will not hurt them, but the native woods are preferable to either; clover, &c., will produce worms. In the spring, when I mark them, I prepare a tub of strong, warm soap-suds, into which I put a quart of grease and a quart of tar, and a decoction of two pounds of tobacco. Into this I immerse the shoats; they are never troubled with lice afterwards. To keep off worms I feed once a week on ashes, (say one gallon to 50 hogs,) with one pint of salt, mixed well with a quarter pound of copperas. My hogs never have the cholera, though I send five or six hundred to market annually. In feeding I never surfeit my hogs. I give them just what they can eat, but none to waste. I prefer to see them rise up with avidity to receive their daily meals.

In conclusion permit me to say that these facts and suggestions have been collected and prepared with great care, and I know they are worthy of consideration by every one who would be a successful breeder of swine. If some trouble and pains are involved in the application of the above it will repay an hundred, and, in many instances, a thousand fold. —*Monthly Report Dep't of Agr.*

Weaning Colts.

When a colt is about four months old, if he has had proper care and training, and if the dam is to be used in harness, or if she is breeding again, he is old enough to be weaned. Supposing, as most farmers are obliged to do, that the mare has to work more or less since dropping her foal, and that the colt has been allowed to follow the dam when at work—the attachment between the two has become very strong. If separated entirely and at once, and if the mare is nervous and high-strung, she will perhaps refuse to work, act frantic, kick, and do everything else she ought not, and would not do, but for the separation. On

the other hand, put the colt into ever so good a pasture, feed him grain and do everything you may—he will run up and down by the fence—perhaps try to scale it, &c., to get to the dam, until he has run off every bit of flesh on his bones. Now, what's to be done?

We would place the mare in a stall wide enough for her and the colt, then we would halter the colt and tie him so that he could get to the manger but not to the teat. It may be necessary also, to change somewhat the halter of the dam, so that she cannot turn sufficiently to allow the colt to suck. Water the colt freely, but the dam as little as possible; feed the colt a double-handful of oats twice per day for two or three weeks before you attempt the weaning. Increase the quantity of oats a little at weaning time, even if you withdraw the *extra ration* by-and-by.

Standing by the side of his dam, he will be more quiet and after a little forget his teat. The mare, also, will leave him more readily in the stable while she labors, especially when she finds him on her return. To facilitate the drying up of the milk in the mare, take a little soft soap and smear it over the udder. It may be necessary to draw out some milk first for a few times, to ease her distress. After a few days, especially if the mare is again breeding, milk will not flow very readily, but be diverted naturally to the embryo foal, and, although the mare may call her colt, she will refuse to let him suck. If possible, the colt should have the best of pasture and the company of other colts of his own age, and the daily allowance of the oats, or a handful or two of meal mixed with wheat bran should be given every day.

The latter years of our life on the farm, we never allowed the colts to follow to the field, but kept them in a loose box in an underground stable during the day. When the mares came home and were watered at night, the colts were allowed a play spell and also at noon while the dams were feeding. The colts kept in better flesh and gave a great deal less trouble at weaning.—*Rural World.*

DEATH OF A NOTED STALLION.—"Old Paul Clifford," whose fame as a stallion extends from Vermont to Virginia, died, "full of years and full of honors," at the stable of his owner, L. Mongar, Esq., at Govanstown, on Saturday last. His disease was spasmodic colic, from which his death resulted after eight hours' sickness.—*Daily Sun.*

Feeding Long Wooled Sheep.

It should be understood that large, long wooled sheep require a liberal allowance of good feed all the year round. With suitable feed in generous quantity they will thrive well, and can be kept profitably. But not so on poor or spare feed; with such they will not succeed.

Many Englishmen come to America with a strong predilection for turnip-husbandry, particularly in connection with sheep, and it is true, also, that English farmers frequently succeed in producing fair crops of turnips in Canada. But there are thousands of Englishmen in this country, who, after trying it a few years, have relinquished all attempts to grow turnips on a large scale, such as would be required if they were relied upon in any considerable degree, as a staple or regular part of our sheep feed. Nor is there, according to my belief, any occasion for attempting to produce turnips in this country, on a scale sufficient to supply them as a staple food. Good grass in summer, and hay made from good grass, with well cured corn fodder and carrots occasionally as an aperient, to counteract the astringent tendencies of a diet composed largely of dry feed in winter—such a variety of feed is not only sufficient, but is as good and as suitable for sheep, in this climate, as hay, turnips and oil or barley meal are in the humid climate of the British Islands.

Clay soils are well adapted to the successful production of peas, which, also, are excellent as a grain feed, for store sheep in the autumn, winter and early spring. With such a variety of feed, large, long wooled sheep can be made to thrive admirably, and the rich milk they will produce from such feed will enable them to rear on an average, in the proportion of *three* lambs to every *two* ewes, which is about fifty per cent. more than some Merino flocks have succeeded in rearing in times gone by.

But what constitutes good grass, or grass suitable for Cotswold and Lincoln sheep that have been accustomed to summer feeding in the clover seed lay of the Cotswold Hills, in Gloucestershire, in the manifold varieties of grass in the richly seeded lays, or thickly sodded pastures of the richer soils of the county of Lincoln, in England?

It might be replied that blue grass (*poa compressa*) is good grass, and so it is. But this is only a single variety of grass, and even

with this, except on the estate of the late J. N. Brown, and a few others, but few pastures are found that are thickly seeded and well sodded, in all the very extensive tract of clayey soil, so admirably adapted to the purpose of permanent grass pasturage in Illinois and contiguous States.

But neither *poa compressa* nor any other single variety, nor even two or three varieties of grass, will constitute a good sheep pasture for long wooled sheep. They have been differently fed. In their native grass pastures, they have been accustomed to feed upon a sod which contained from a dozen to a score of varieties of the grasses, and in which twenty varieties can to-day be found within an area of one foot square, of which are clover, cow grass, rye grass, meadow fox tail, cock's foot, meadow fescue, rough stalked grass, smooth stalked grass, wood-meadow grass, sweet-scented vernal grass, timothy, bird's foot, burnet, dog's tail and other varieties.

The pastures on lighter soils are formed of clover lays, so called because clover is the leading variety of the "seed" used in "seeding down" the "lay;" the lay being a temporary pasture provided by seeding down arable soil once and generally for two seasons in a rotation of five or seven years. A "seed" or clover lay may comprise red clover, rye grass, foxtail, etc., on strong soils; on lighter soils white clover, trefoil sanfoin, trifollium, etc.; in either case there is a mixture comprising three or four varieties of clover, and six or seven where the soil is rich and heavy and suitable for sustaining a strong growth of grasses with the clovers properly so called.

It is not intended here to imply that precisely such mixtures and varieties of grasses as we have alluded to are well or illy adapted to the strong soils of the West. But the fact and the necessity of a variety of grasses to constitute good pastures, adapted to, and suitable for long wooled sheep, is what is confidently claimed to be indicated as necessary by long usage with them in England.

Variety, as many will understand, gives successive growths of feed. Early grasses supply early feed, foxtail and timothy come in, in the middle part of the season; while blue grass and other varieties supply that most valuable element of success, late fall grass feed.

The value and seasons of June grass, red top, timothy, orchard grass, blue grass and white and red clover, are pretty well understood. Experiments may soon determine the value of a number of the English varieties. And a little reflection will convince any one disposed to thinking on the subject, that late grass feed is indispensable; that succession alone can supply variety of feed; and that a considerable variety of grasses are indispensable to succession, and for supplying green feed from the opening of summer till the close of the autumn season.—*J. W. Clarke, in West. Rural.*

Training Tomato Vines.

A neighbor lady last year trained her tomatoes up small poles—bean poles—over six feet high, reaching out above the poles. This case is a practical demonstration of the success that may attend this method of training. If I had not seen with my own eyes I could hardly credit a truthful account of it. The poles were set before the plants were, and when the latter began to grow the leading shoot only was retained, all others being kept off through the season. As it increased in length, it was tied to the pole with common wood twine from time to time—simply a vine like a morning-glory or honeysuckle.

The fruit of course set first at the lower end of the vine, and as the season advanced, higher up, until now there is fruit that bids fair to ripen at the top of the poles. There it hung in beautiful clusters, easily accessible, with no obstruction whatever, and no fruit rotting under a swamp of vines where the sun could not touch it. This is all open to the light and heat of the sun and to the wind. The plant, in short, has a fair chance given it to develop itself, and it was ready and glad to avail itself of the privilege. If there is a worm on the vines, he cannot hide away, but can easily be found and destroyed; and the ground can be worked and the weeds kept down through the whole season as easily as among corn.—The grower is "master of the situation," and he feels it, and the pleasure and profit derived are thereby enhanced.

The plants may be set in rows four feet apart, and thirty inches apart in the row. They will bear to be set closer than this, but there will be less freedom of movement for the hoeing, tying, etc. Try it, reader; it is as cheap as the common trellis—yes, cheaper; it is easy, certain, will ripen fruit earlier, and give you more of it, of good quality, from the same areas—in a word, will please you.—*Jour. of Agriculture.*

Pigs in Summer.

Summer is the time to make pork; making it in winter is much like running a boat against wind and tide; it requires too much food to keep up the animal heat. If hogs have plenty of grass in summer, and about half the corn they will eat, they will fatten rapidly; and my belief is that three pounds of pork can be made of less grain in this way than one pound can be in cold weather with a hog in a close pen. The grass is cooling and loosening, and counteracts the feverish properties of the corn. Hogs will never melt in summer, however fat, if they can have access to water and mud to lie in. Mud is very bad for hogs in cool or cold weather. It absorbs too much animal heat. Milk is a very cooling drink, and almost indispensable to raising young pigs. But very little corn and no corn meal should be fed to young pigs before they are four months old. The effects of corn and raw corn meal on young pigs are these: The pigs at first will be costive; then they will scour. They will begin to rub against everything they can rub against, that will rub their hair off. Their skin will have a red and dry appearance. A dry, black scurf will begin to form on them; and the more of the corn and meal they eat, the poorer they will get. The best thing that can be done for a pig in this condition is to give him a thorough washing in warm water or sour milk; sour milk is best.

Coarse flour or middlings from rye or wheat, when made into a thin drinkable slop with milk, is the best feed for young pigs, except bread and milk. Bread is good for very young pigs because it is leavened. Food has to ferment before it will digest, and if fed to a young pig before fermented, it will over-task the stomach and spoil him. Lettuce is good for young pigs. It will stop the scours in them. The middlings should be put with the milk at night, after the feeding has been done, and allowed to be in the milk through the night, never allowing the swill tub to get quite empty, always leaving a little in the bottom for yeast. The swill should never be permitted to get stale. Slop feed should be fed often, and never more fed at a time than will be eaten up at once. Slop feed will make larger hogs than dry feed. After the pigs get to be three or four months old, their food can be made stronger; but a pig will not bear much stronger food until it begins to change from a pig into a hog, which will be known by his voice. In the West, where hogs are raised on a large scale, but one litter should be raised from a sow in a year. The fall litter will require too much care for the farmer. One litter can be got in April and another in September or October following, from one sow, but the spring pigs will have to be weaned from four to six weeks old, and fed on clear sour milk for two or three weeks after weaning, and fed often. New milk once a day will keep them from scouring. Sour milk is better than new milk. New milk will first make the pig costive, then scour him. It will curdle in his stomach, but sour milk will not. The late fall pigs should suck as long as they will, and the sows should be fed on warm slop feed, and fed often. The slop can be warmed by pouring hot water into the swill tub. A breeding sow should never be fed much dry corn. She will get foundered on it and spoiled.—*Amer. Stock Journal.*

Dr. Voelcker on Hay-Making.

Grass and clover, when ready to be cut down, contain a considerable quantity of sugar, gum, mucilage, albuminous and other soluble compounds, which are all liable to be washed away by heavy showers of rain. As long as grass is still quite fresh, rain falling upon it has little or no injurious effect, for fortunately a coating of waxy or fatty matter covers the epidermis, and wraps, so to speak, the whole vegetable matter in a water-proof mantle. Rain for this reason may fall for days on newly cut grass without doing any injury to it; but the case is very different if, by repeated turnings, the crop has become more or less bruised, and rain then descends upon the half-made hay; not only are sugar, gum, and other soluble matters then liable to be washed out, but the bruised state of the plants, admitting at least a partial diffusion of the various constituents through the lacerated cell-walls, induces fermentation, which, if not checked at once, causes further loss. During the fermentation, soluble albumen, and sugar are destroyed—two of the most valuable elements of nutrition. In showery weather, grass recently cut should, for this reason, not be turned over more than is absolutely necessary, and under all circumstances it is desirable to handle the crop as lightly as possible, in order that it may not get much bruised.

I have seen farmers spending labor in turn-

ing hay on overcast days, on which a dew-point hygrometer showed the air to be nearly saturated with moisture, proving that evaporation could not possibly take place at the time, and rain might be expected at any moment.

As long as grass and clover are still quite fresh, the proportions of water to sugar in the green plant are too large to encourage fermentation; the nitrogenous constituents in newly-cut grass, moreover, only become ferments after the vitality of the plant has been destroyed, and the vegetable cells and vessels have become ruptured by partial drying, and their contents have been mingled together. With the evaporation of water, and the more or less complete destruction of the living organization of the plant, the conditions become more favorable for active fermentation. Should the weather unfortunately turn showery at that stage of the hay-making process, and the air become saturated for many days and weeks together, the half-made hay often begins to ferment already in the field. When this takes place, the hay loses in quality and becomes much more liable to heat afterwards in the stack. If, on the contrary, fine and warm weather sets in, and evaporation proceeds with rapidity, the per centage of moisture soon sinks sufficiently low to prevent altogether, or greatly to retard, fermentation. The hay remains sweet and shows far less tendency to heat in the stack, even if it actually contains more moisture than hay made in unfavorable weather. The more quickly the hay can be made in the field, and the less it gets bruised or loses color there, the less likely it is to heat in the stack. Much hay is injured however, when it is quickly made and in a fine season; it looks to be ready before it is so.

If dried ever so much and ever so carefully in the field, hay nevertheless heats to some extent in the stack. A slight fermentation, so far from being injurious, may be useful, for, as is well known, peculiar aromatic principles are thus generated, which certainly renders hay more palatable, and, it may be, more nutritious. As long as the green color is retained, there is no danger of the hay losing in quality; but if the heat in the stack becomes so intense and continuous as to turn the hay decidedly brown, I have no hesitation in saying that considerable loss in feeding matter is incurred.—*Jour. of Royal Agr. Society of England.*

Usefulness of Willows.

Farmers should have a patch of osier willows growing near the homestead, as they are exceedingly useful for many purposes. Baskets of various sizes are needed in the house, barn-yard and field, and when there is plenty of material they can be made within doors in winter, when farm work is not pressing. The *Salix viminalis*, or basket-willow, is best suited for this purpose. Of the purple willow, *Salix purpurea*, it has been said that "if there were but one ozier in existence, this would supply more of the wants of willow-workers than any other one." Willow withes are very useful in the garden, nursery, or pleasure-ground, as they supply an abundance of ties for fastening vines or trellises, tall-growing flowers to stakes, and also serve for bands for the nurserymen. The clear stems of two or three year old willows furnish poles for beans, etc., and when split make hoops for vessels of various kinds. The golden osier (*Salix vitellina*) is very ornamental, even when entirely denuded of foliage. It is also useful, for its young shoots make good ties, and its medium sized branches and twigs furnish pea-brush, a thing that is not always at hand in some gardens.

Willows will grow in a great variety of soils, especially if moist, but not profitably in any unsuited to their habits. Drained swamps afford fine sites for willow plantations. A deep, rich bottom of sandy loam that is occasionally overflowed, is very suitable for their growth. Any amount of overflowing, not in the growing season, does no damage, but increases the fertility. Richness of soil is important, great depth indispensable, and easy culture desirable and profitable.—*Ex.*

The editor of the *Gardener's Monthly* says: "There is nothing that will make as good a border as Box, or some of the dwarf Arbor-vitæs. Of flowering plants, the best is the Perennial Candy-tuft. This will flower in April. The mountain or Moss Pink—*Phlox subulata*—is a pretty edging.

C. F. Dewey, of Berlin, Vt., made from fifty-seven buckets of sap, seventy pounds of grained sugar and one gallon of maple honey

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The *Prairie Farmer* says a Kentucky woman, feels more pride in having the first green peas than the first spring bonnet.

When to Cut Hay.

Haying ought to be begun early. As to the exact time to cut it, must depend much on the judgment, and on this point farmers disagree. Some recommend cutting when the grass is in bloom, others when the blossoms have just fallen, others when the seed is in its milky state, and others still when the seeds are ripe. The advocates of the last mentioned time are few, and growing beautifully less. As attention has been paid to the time of cutting grass, and the observation of farmers has been turned in this direction, a great change has occurred in the opinion and practice on this point, and the grass of Massachusetts is probably cut a fortnight earlier now than it was ten years since. Towards this result the mowing machine has greatly contributed, as it enables us to finish the hay harvest with great dispatch. Still, the practice of many farmers is to be dilatory in their haying, and the consequence is that they lose much of the virtue of their hay.

In 1856, the Secretary of the Massachusetts Board of Agriculture addressed a series of inquiries on the hay crop to one or more farmers in each town in the State, and this question was asked among others: "At what stage of growth do you prefer to cut grass to make into hay?" Answers were received from more than two hundred towns, and those from a hundred and fifty towns, about three-fourths of the whole, a majority sufficient to overcome any veto, were in favor of cutting timothy and red-top when in full bloom, and red clover when about half the heads are in blossom.

This, we think, is the true theory; but we fear the practice, though greatly improved of late years, is not up to the theory. Grass passes so rapidly from the blossoming stage to that of mature seed, that before we are aware the virtues of the plant are concentrated in the seed, and the stalks and leaves become dry, hard and indigestible woody fibre. Some argue that cattle love this dry fodder, and that there is more nourishment in it than in its green, succulent state. If so, why do not the instincts of cattle lead them to eat it when roving in the pastures and acting their option as to what they will eat. All must have observed that when in any locality in a pasture the grass has gone to seed, cattle avoid it, and nothing but starvation will induce them to eat such grass. The instincts of cattle are a pretty sure guide—certainly as likely to be correct as the abstract reasonings of the minority of men.

The true principle in haying we think is to secure the hay at a time when we can harvest the largest amount that shall be like grass in its perfect state; and this we can do when the grass has attained its growth, and before the starch, sugar and gluten of the plant have gone to the formation of seed or been converted into woody fibre. The starch and other nutritious compounds are on the increase so long as the plant grows; but with blossoming, growth ceases, and now is the time, with the least labor, to secure the greatest amount of forage in its best condition.—Our mothers, when they sent us out to gather pennyroyal and boneset, with the extract of which they expected to make good herb tea, always instructed us to select the herbs in full bloom. They may not have understood the chemistry of plants, but they knew from trial that these herbs while in blossom made the strongest decoctions, and that this was the time to dry them for future use. Miserable herb drink would boneset make if left in the field till the stalks and leaves were dry and the substance of the plant transformed into seed. Now dried grass is not unlike dry herbs; and a good test of the quality of hay is found in making a decoction from it, and whoever tries it will find that hay cut while the grass is in blossom makes the strongest extract. Just so the hop grower is always careful to pick his hops, not in the old of the moon in August, as the rule of superstition has it, but when the hops are in full bloom and the pollen of the flowers most abundant, for picked at this time, they make the strongest ale. We do not desire to make ale from our hay, but we do desire to preserve all the aroma of the flowers and all the stimulus that green hay gives to the animal system. We have heard it said that timothy cut when in blossom is apt to be dusty. We doubt very much the truth of this. The idea probably originates from the pollen of the blossoms being scattered at the time of harvest, giving the appearance of dust; but from such dust we should apprehend no evil to cattle or horses.

The days are long and work pressing, and the farmer should guard against overdoing. In wet or rainy days clear up the barn and put the tools in order.—*N. Eng. Far.*

The American Farmer.

Baltimore, July 1, 1869.

TERMS OF THE AMERICAN FARMER.

SUBSCRIPTION TWO DOLLARS PER ANNUM.

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A New Volume.—State Ag. Society.

This number opens the fourth volume of our current series, and with it we are happy in being able to announce what we trust will be the beginning of a new and prosperous era in the agriculture of the State—we mean the assurance of an agricultural exhibition at Baltimore, under the auspices of our State Society.

The Premium List set forth in our advertising pages, it will be seen, offers about ten thousand dollars in premiums, and will induce, we cannot doubt, active competition in all the departments of such an Exhibition. Apart from this, we trust our Stock-growers and agriculturists generally, and our manufacturers of farm implements, will for the honor of the State, vie with one another in their efforts to get up a show that will far exceed what we have had heretofore.

Our Horse-men will need no prompting from us, but will be only too glad to show the mettle of their steeds on the beautiful track now being made.

We visited the new grounds lately and found them already enclosed with a substantial eight foot board fence. The area enclosed is nearly eighty acres, and the driving track one mile in length. All the necessary buildings will be at once erected in the best manner.

These grounds have been purchased at a cost of something over twenty-five thousand dollars, furnished by the State, and for the improvements, the Society has twenty-five thousand dollars from the City Council, and thirty thousand from private subscription, with a prospect of ten thousand more before the subscription lists are closed. We are thus starting under most favorable circumstances, and can but anticipate a prosperous career for our new Society.

To Subscribers.—We ask the serious attention of subscribers to the little reminders which may come with this number. We have no idea but that *our* subscribers are the best in the world, but like all other good people, some of them have failings. They think, perhaps, they have done their part by us, when they pay us the compliment to read what we have to say; or they think we have no need of money in conducting a paper; or they have an amiable way of *intending* and not doing; either one of which results in our getting no money for what we furnish them. The little reciprocity treaty between us works all on our side, and brings about a state of things, that business men say is not in strict accordance with business ways. We have no intention of taking any of these good people "by the throat," as the man in the parable, but we can leave them to their enemies, and "pass by on the other side;" and this we will do if they fail to give us "indemnity for the past and security for the future."

Baltimore and Western Railroad Connections.—It is understood that a contract was concluded lately between the Baltimore and Ohio and Indianapolis, Cincinnati and Lafayette Railroad Companies for permanent business connections to and from the West by way of Cincinnati. The arrangement provides for through trains, rates and facilities for the utmost development of the joint traffic. The former company becomes also largely interested in the securities of the Indianapolis, Cincinnati and Lafayette Company. The arrangement is looked upon as greatly beneficial, not only to the roads concerned, but to the cities of Baltimore and Cincinnati.

The annual exhibition of the Frederick county (Md.) Agricultural Society will be held on the 12th, 13th, 14th and 15th of October.

To Get Up a Flock of Sheep.

There is no farm stock that yields more net profit than sheep, and no good farm should be without a flock proportioned in some measure to its ability to maintain it. It is fortunate too that a good flock can be had at small cost and increased indefinitely in a short time. The sheep is emphatically the friend of the farmer of small means, living, thriving and increasing when other stock would scarcely live at all, and furnishing food and clothing and profit for a small amount of care and expense. For these reasons and because so many farmers have now land that they cannot work profitably, which may be readily turned to profit in this way, that we have often urged attention to the value of sheep. To those who have no flock or propose to improve such as they have, we offer the following suggestions.

The first object, to one not supplied with a good breed, will be to provide himself with such as may suit his circumstances. If he has the money at command to do so, he should purchase of the breed he may select a ram and a few ewes. From these he will raise all the young, and in a few years he will have a flock of the best full bred. But in the meantime, from the same ram, and such ewes as he may already have, or may be able to buy, he may raise a flock of half bred, which will serve his purposes for the present.—These ewes he may get wherever a market presents. but generally for a considerable supply, we must look to the flocks which are brought to the large markets to be sold to the feeders. The best selections should be made from these, and where it is possible the chosen ewes should be near the character of the ram to which they are to be bred. This matter it will be found hard to control, because these lean sheep are generally Merino crosses, and we should not, in Maryland at least, select that breed for our purposes. But to get a supply of ewes, we must take the best that offer, and we may be able to get none but these.

The ewes being obtained, let them be kept from the ram till the first of October, and the lambs will then come the first of March, and during that month. Coming at this time they escape the rigors of a severe winter, and by the time they need it, the dam has a full flow of milk from the springing grass. They grow rapidly, and soon make up the loss of time, never having their growth checked by deficiency of their proper nourishment.

The ram-lambs should all be castrated when a few days old, and the tail cut off at an inch from the root. They mind the operation little when performed at this time, but great care should be taken in handling, lest they be bruised and injured in struggling. Let them be held firmly and quietly. They make better fat lambs if to be sold as such, for being castrated, and if to be kept for wethers, there is much less risk in the operation when so young.

The ewe lambs, we assume, are all to be kept for breeding. If not, select such as most resemble the sire, and keep them constantly growing. It is not uncommon with careless breeders to let these continue to run with the flock, and most of them will breed in the fall, to their great injury. They should be taken away when weaned in August,and kept entirely apart from the ram until eighteen months old. They will then bring their first young at about two years of age. They should be put to a ram of the same breed as their sire. It might answer to put them to their sire, but it is only in cases where an individual possesses certain excellencies in a higher degree than they are usually met with, and is at the same time free from defects, that this kind of breeding would be advisable.

When the first set of ewe lambs are bred, the ewes which were first purchased, have bred two years, and brought two sets of lambs. If the flock is now as large as the owner desires, the old ewes should be fattened and turned off. The lambs which will now come from the first set of young ewes, will be three-fourths of the breed of the sire and grand sire. The ram-lambs of this stock should be castrated, and the best of the ewe lambs selected for breeding. If, in the beginning, any ewes of the same breed of the ram were obtained, their produce has been preserved, and in course of time will constitute the whole flock. If no ewes of the breed of the rams have been obtained, the cross-bred ewes will be bred to such rams as were first adopted, till the progeny cannot be distinguished from the full bloods. If the increase is too great for the convenience of the owner, it will give so much the better chance to select out the finest, turning the others over to the butcher, or to some neighbor who may want them to breed from.

As to the breed of sheep to be selected, there will be difference of opinion as to which of

those known as mutton sheep should be preferred. There can be no question in Maryland and the surrounding States, convenient to great meat markets, between these and the fine wool breeds. What is needed here first, is meat, and the stock that will supply this, and give a valuable return in wool, too, will be preferred.

Among the mutton sheep there are the long wools and short wools. Of the long-wool breeds, the Leicester and Cotswold are most prominent. The latter are the largest, most handy, and produce most wool. They have in general less symetry than the Leicesters, and probably do not manure quite so early. Both of these breeds make more fat in proportion to the lean, than some of the short wool breeds and the flesh is coarser in texture and not so well flavored. In England the price of mutton is graduated according to the breeds; so that although the long-wooled breeds will make the most pounds of meat in proportion to expense, the superior price of the meat of the short wool will make them quite as profitable. In this country the taste is not so discriminating, and it is only of late years that we have made the distinction. Butchers now in their advertisements of good meat, appeal to the taste of the consumer in announcing a supply of South Down mutton

Of short wooled breed, the South Down has long been the favorite. In quality of meat it is only excelled by the Welsh and Scotch mountain breeds. It has been greatly improved in symetry and weight of carcass, and, in fleece, too, by such breeders as Mr. Jonas Webb and his competitors for show prizes. The Oxfordshire Down is a comparatively new variety, and is intermediate, as to length of wool, between the South Down and the long wools. They were introduced some years ago into Virginia, and both they and the South Down may be considered better adapted to dry short pastures than the Cotswolds or Leicesters. The Shropshire Downs of late years have attracted much attention in England, and were, some years ago, introduced into Maryland by a judicious breeder, who went to England to get South Downs, but after examining the best flocks gave the Shropshire the preference. They are rather larger in general than the South Down, and their wool is similar in character. Their meat sells in England as high as the South Down, and is by some preferred on account of its having a greater proportion of lean, and the fat and lean being better mixed.—They are said to be more hardy than the South Down.

The profit of the several breeds will, of course, be effected materially by the value of the fleece, and it is proper to take this item into consideration in determining between them. An experienced writer on the subject makes the following comparison (the prices named being those before the war.) "The fleece of the Leicester, of the best flocks, may perhaps average six pounds each, including the usual proportion of breeding ewes in the flock. The Cotswold is a little coarse, but not enough so to make a difference in the price. When ordinary merino wool is worth forty-five cents per pound, this would bring thirty-three cents. The South Down is, naturally, rather a light fleeced sheep, and more inclined to shed its wool in spring, before shearing time than other sheep. It must be a good flock, even of the Webb stock, that will average four pounds a head of washed wool—one-half of the flock being nursing ewes. The wool does not command much more in market than the Leicester and Cotswold—say three or four cents per pound. The Oxfordshire Downs, from what we have seen of them, we should think would average a pound more of wool per head than South Downs, and the difference in price would be, perhaps, two cents a pound more in favor of the latter.—The relative value of the fleeces of four of these breeds, may therefore stand as follows:

Leicester, 6 lbs. per fleece,	at 33c....	$1 98
Cotswolds, 7 lbs. "	at 23c....	2 31
South Down, 4 lbs. "	at 36c....	1 48
Oxfordshire Down, 5 lbs.	at 35c....	1 75

These prices answer for the purpose of comparison. For rich pastures, the precedence in point of profit, taking mutton and wool into consideration, would undoubtedly be given to the Cotswolds, while the South Downs would be preferred on poorer pastures, having more activity and needing less food.

GOING SOUTH.—Over three hundred colored persons have recently left Southwestern Virginia for the more Southern States. From almost every other section of Virginia it is stated that they are taking up the line of march southward. An exchange, in view of these facts, asks how long will it be before the colored people cease to be a political power in Virginia?

Of Moles and Other Country Friends

It may be thought a wilful braving of public opinion to call the mole a friend. All the world, in all time, has made war on him as an enemy, and, now if we presume to say a word in his behalf, that he is *carnivorous*, &c., we are met somewhat indignantly with the reply, 'Why, sir, d'ye think I've lost my eyes?" as if we had said somebody was a mole, so far as his eyes were of any use to him. "Haven't I seen my potatoes rooted up? Haven't I seen his tracks through rows of beets and peas." Never thinking there might be worse enemies than the mole, and that the little fellow was following only the line of his duty, in hunting and killing them.

There has been of late an active discussion in the Journals as to the character of this little animal that ploughs our gardens sometimes to our great dissatisfaction. Heretofore he has been treated almost universally as an enemy, and curious traps and devices have been used for the destruction that he never escapes when he is caught. Now we are being informed that this was all wrong, that so far from being an enemy, we have no better friend. Why have we not learned sooner a fact so readily determined, and how long will it be before farmers and gardeners generally will cease to kill their friends, now that the fact is known? We have a distinct recollection that the late Dr. Muse, of Cambridge, Maryland, satisfied himself by careful experiment, twenty years ago, that the mole was strictly carniverous, and therefore could take no pleasure in destroying garden plants, as was commonly supposed. As that very intelligent and public spirited gentleman communicated constantly the results of his diligent investigations to the agricultural journals, this fact was, no doubt, then published, which now appears again as a discovery, only to go to sleep again for twenty years more, probably, in the knowledge of those who are most concerned to know—those who are influenced by the small, manifest evils the little fellow does, rather than the large unapparent good.

"The food of the mole," says a writer in the London Quarterly, "consists of earthworms, slugs, cock-chaffers, wire-worms and other pests of the farm; the roots of grasses and plantains are occasionally found in its stomach. Its appetite is enormous, its consumption of food prodigious. The mole cricket, (*Gryllotalpa Vulgaris*,) so destructive in corn-fields, meadows and gardens in some parts of England, is eagerly devoured by this little quadruped." Bouche, a German writer on "Insects Injurious to Gardens," mentions the case of a field containing an endless number of these "root worms," mole crickets, which was freed entirely by the moles in two years. The high authority of Mr. Wren Hoskyns, is quoted to the same purpose in an extract from "Talpa or the Chronicles of a Clay Farm."

"Even your tiny mole is a ruthless beast of the field—to slugs and snails and caterpillars, and such land-sucking fry—a fierce sub-navigator in his way, but his tracks turn up some pretty cultivation, it only wants *spreading* far and wide; it is not so wise to throttle him as you think. I grieve to see him hanging gibbeted, his clever paddles stopped by ignorance. For he is your only granulation master; he taught us drainage and sub-cultivation, and we shall learn of him another and a greater lesson some day, and call him a prophet, when we have done hanging him, and have got some speculation in our own eyes, (whose sense is shut at present,) instead of saying *he* can't see."

In conclusion, as to the mole, it is said: "We are no advocates, for refusing to hold in check any animals in places where their too great increase is the cause of injury, but this is a very different thing from indiscriminate slaughter—so popular amongst farmers generally—with a view to extirpate a whole race. In certain localities a large number of moles may, undoubtedly, do much damage; as, for instance, in mowing grass, where the mounds of earth would interfere with the work of the scythe, and also injure the crop by mixing with the hay. In corn-fields and in gardens we believe that the moles do infinitely more good than mischief by destroying countless myriads of injurious insects, slugs and wire-worms."

There is no branch of agricultural knowledge more likely to be immediately effective in substantial results than that which pertains to the character and conduct of our little fellow-citizens of the air, the earth and the forest. Which of them are our friends and which our foes farmers are in the main severely ignorant of. Untutored boys are allowed and encouraged to destroy birds which, in the main, are our only protectors against ravaging insects; and in all our operations, whether

against bird, or beast, or insect, those who may claim to be best informed generally, are indiscriminate in our ignorance, and are as likely to spare a foe as to destroy a friend.

As the first step in the way of knowledge is to know our ignorance, we will be further indebted to the article in the London Quarterly for information illustrative of the untaught opinion which prevails as to even the most familiar of our surroundings.

Another little animal, of which the common opinion is that it does only evil, continually, being judged by the same law of the small, manifest evil and the large unapparent good, is the weasel. He kills occasionally a chicken, and so has got himself a bad name. Of him the writer says: "We are inclined to class the weasel amongst the farmer's friends, except when they occur in too close proximity to the dovecote and poultry-house. In such localities these determined little carnivora ought to be destroyed, but where they are found remote from farm buildings, in the hedge-rows and woods, the farmer, perhaps, will find himself much relieved by their destruction of rats, mice, field voles, rabbits and other vermin.

"That man only who has seen a weasel go into a corn stack can form a just idea of the horror which its approach causes to the Hanoverians (rats) collected there for safety and plunder."

Of another familiar acquaintance, whose fate is to be hunted from the face of the earth, as an unmitigated, incurable marauder, it is remarked: "What we have said of weasels will, we think, hold good of the fox. Reynard is an insufferable nuisance when he takes to poultry stealing, and his well-known thieving propensities, coupled with his sagacity and shyness, render him a fit object of the farmer's wrath. Occasionally he will fancy a dinner of lamb, but it would appear that little comes amiss to the fox; he will kill his own game, or make use of what has been destroyed. It is said he does not disdain to partake of frogs and large insects. Of rabbits he is particularly fond, and kills a large number of these destructive farm pests."

On the necessity of preserving birds for our own protection against the ravages of insects, it is argued that while it is in the power of man to protect himself against the larger animals and the birds themselves by a war of extermination, "the lower he descends the scale of creation, the greater the difficulty to control numbers." This arises principally from the following reasons: 1. The amazing fertility of some creatures. 2. The inaccessible nature of the places tenanted by them. 3. Our want of knowledge of the life, history and habits of various animals. With regard to insects these three considerations are frequently combined; probably the united efforts of the whole human race would of themselves, be sufficient to act as a direct check upon most kinds. But what man cannot do nature is able to effect. The countless tribes of insects are held in check, in a great measure, by birds and other animals, while one family of insects is often useful in destroying vast numbers of others. What a wondrous connecting chain links together the long series of living organisms, from lordly man to the smallest animated atom! How mistaken is man in being so ready to interfere with the compensating laws of nature!

Birds as a class are among the best friends to agriculture which we possess, but it is seldom that their eminent services are acknowledged. On the contrary, they are generally requited by increasing persecution at the hand of the farmer. We will hereafter notice such of these as are usually looked upon as enemies, but which, it may be shown, do such service as to entitle them to the character of friends and to the protection and fostering care of man. Of these are the sparrow-hawk, the owls, the crow, and many others.

EARLY TOBACCO PLANTS.—Every planter of tobacco knows the importance of getting early plants. A correspondent of the New England Farmer, in a latitude where it is much more important than here, gives the following:

"One neighbor who generally succeeds, says he ploughs in all the manure he can conveniently in the early fall, and ploughs at least twice more, before the ground freezes up. In the spring he rakes in 'Russell Coe's superphosphate.' This year he was setting plants in May. We think the seed beds should be ploughed as often as once a month after taking off the plants, and the manure applied as early as July, so that the wild seed in the ground and manure may have a chance to germinate, and be destroyed by the ploughing, before sowing the beds. This is our method; who has a better?"

Book Notices.

The Practical Poultry Keeper, a Complete and Standard Guide to the Management of Poultry, whether for Domestic Use, the Markets or Exhibition, by L. Wright. N. York: Orange Judd & Co., 245 Broadway. We are indebted to Henry Taylor & Co., Sun Iron Building, for a copy of this comprehensive little work. Poultry books are always in demand, and always should be, we think.

The author's "apology" for this addition to the number already in print is: "That a *practical* treatise—authoritative, and comprehensive, yet simple and popular—has yet to be supplied. We are not to the present time aware of any work we could put into the hands of a person totally *ignorant* of poultry-keeping, with the reasonable certainty that its instructions, if followed, would command success."

Demorest's Monthly.—This elegant lady's magazine for July is received, and is equal to its predecessors. This is praise enough.

Mowing and Reaping.—A trial of reapers and mowers took place at Louisville, Ky. on Tuesday, the 29th of June. Recently trials have been made at Westover, James River, for the Southeast; at Amherst, Mass., for the New England States; at Sedalia, Missouri, for the West, and the Southwest goes to Louisville. The agriculturists of the Southwest, it is thought, will be largely influenced in the selection of machines by the result of this trial. Three of the five judges have been selected from States adjoining Kentucky—two from Indiana and one from Tennessee. There will probably be forty machines in the contest. The trial will be a thorough and severe one, and the judges are to be assisted in arriving at a verdict by a committee of competent mechanics. The result desired to be obtained is to determine which machine commends itself to the farmer, by reason of having the greatest number of merits with the fewest defects. The premiums will be as follows:

For the best mower, grand gold medal, valued at $150; for the best reaper, $150; for the best combined mower and reaper, with self-rake, $150, and for the best combined mower and reaper, with dropper or hand rake, $150. The entrance fee has been fixed at $15 for mowers, $20 for reapers, and $25 for combined machines.—*Balt. Sun.*

For the "American Farmer."

"Will Lime Kill Sorrel?"

A leader in the Prairie Farmer of 29th ult. discusses again this old question and reviews my article on this subject, published recently in the Farmers' Gazette and copied therefrom into the Rural American, of New Jersey, and the American Farmer, of Maryland. The fact that one who manifests so much research and intelligence has misunderstood this explanation of my theory, is due to my attempt to popularize it—(perhaps?)

1st. I do not deny that lime and soda—much less do I deny that potash will cure or prevent sorrel—and for the very reason that they rapidly oxydize all carbonaceous matter, and form therefrom carbonic acid instead of the poisonous gases that *naturally* result where clover, &c. decay without the presence of these strong bases. In the presence of soda lime in the laboratory, and much more in the presence of potash lime in the soil, clover is converted into ammonia; whereas carburetted hydrogen and sulphuretted hydrogen naturally are formed therefrom, when it rots alone. The Prairie Farmer makes me say, on the contrary—or, at least, says that "the application of any form of soda or potash would result *un*favorably to the killing out of sorrel." In a former number of this journal, I have explained the action of lime, which appears to be used empirically by our most intelligent agriculturists and misunderstood by those whose business it is to discuss such matters. A technologist has the same advantage over such as "the printer's devil" will always have over the amateur printer.

There is a great deal of Divine wisdom in that servitude of man during infancy, which has become apparently unpopular of late years. The fagging system at Rugby, in England, is, no doubt, the indorsement of the importance of the *first* step towards a captaincy, by the most refined of earth's noblemen.—Digging is necessary in order to see the truth—mere superficial observation (although embracing a greater area, and, like the beautiful mosses or lichens, covering what is apparently built for their support) may be unreliable. Thus, in the second place, the Prairie Farmer draws an argument from the fact that mosses contain more oxalic acid than sorrel and grow "on the *marble* pillars of the Pantheon at Athens"—"the lime of the wrought marble obviously contributing to their susto-

nance." Marble, however, is not "*lime*," but a salt—carbonate of lime—precisely as common salt is not caustic soda, nor is it bleaching, suffocating, poisonous chlorine—nevertheless, all the soda of our common soap and glass and all the white paper we use are dependent on the elements of this common salt. During nearly six milleniums, mankind ate salt—as the seventh dawns, its elements afford, not only soap and glass, but books and journals of agriculture for the poorest laborer.

Salts of lime abound in the human system at all times, but oxaluria, or the oxalic diathesis, frequently prevails, indicating the treatment *that corresponds with liming* in agriculture, viz: lime or soda, or, better than either, potash is employed by the farmer to oxydize, or rust the elements of the soil much more rapidly than the old system of weathering, or fallow, precisely on the same principle that chlorine is used in bleaching as a substitute for the old process—and, although chlorine does not contain oxygen, it is *the* most powerful oxydizer. Every one who has experienced the loss or decay of a shirt under the hands of a lazy laundress, who uses soda instead of soap, can form some idea of what may be expected from caustic potash; and most persons are familiar with the fact that lime-water, or a solution of pure lime, will soon destroy muslin. Thus lime, potash and soda are proven to be the most economical *oxydizers* of the soil—whilst oxymuriatic acid and nitric acid, also the nitrates and chlorates cure the oxalic acid (sorrel acid) disease in man. More than fifteen years since, when my office was in Eutaw street, Baltimore, a medical friend in Allegheney, Pa., sent me some chalky concretions that had cropped out on the neck and cheek of a lady. My microscope diagnosed them as oxalate of lime, and indicated the usual treatment. A few years previously a case of distressing enuresis in my own practice had been detected by the beautiful octahedra of oxalate of lime, and promptly relieved by nitromuriatic acid.

The principles upon which the Prairie Farmer recommends nitric acid and the nitrates to cure sorrel are no doubt correct; but the expense of such applications is to be considered, unless the celestial visitors of our Western territories fail in reducing the cost of labor and bring with them some cheaper "East India saltpetre" than is now supplied. More than fifteen years have elapsed since I saw a statement in the Journal of the Royal Agricultural Society of England that "a hatful of South American saltpetre (nitrate of soda) would manure an acre of land." I secured a ton at a cost of about $100, but its application, both in Maryland and Delaware, did not encourage its repetition. Nevertheless, I am confident that the reports of its wonderful effects are reliable. The failure in its empirical application elsewhere may be accounted for on the hypothesis advanced by the Prairie Farmer, which is, no doubt, correct, viz: that the main value of nitric acid and nitrates (or saltpetre) is the same in the soil that it is in gunpowder, viz: the more rapid combustion, or oxydation of the carbonaceous matter. If I had applied it to an old pasture, rich in vegetable mould, or carbonaceous matter (as, most probably, it was applied in England), the result would have been the rapid development of the fertility *dormant* in the soil; whereas, by applying it as a manure to our cultivated land, it apparently failed. Nitrate of potash would promise a better result, as the potash would act as a manure; but it is too expensive in this form; whereas, in the form of "the lime compost," it deserves the name of "Hercules in Agriculture"—operating both directly and indirectly.

Lime alone is next, but less economical in cost and labor of application—also, it seldom, if ever, acts directly as a manure, but only indirectly—or assists the farmer in more speedily robbing the soil. Soda must be placed in the same category with lime, "and a little more so," as it is more apt than lime to take the place of potash in the nutrition of our cereals—thus, by "substitution," producing inferior grain or fruit.

Empirical agriculture is necessarily very expensive—we should, if possible, *know* why certain expensive fertilizers produce marvelous effects, and not condemn them or their authors because these effects cannot occur under *all* circumstances.

When charcoal, or carbon, in any form, burns, it passes through several stages of oxydation—whether it burns in the fire—or, without fire—i. e. oxydizes, or rusts slowly. Carbonic oxyde is one of those stages or steps. On the contrary, I understand the Prairie Farmer to endorse the opposite and erroneous idea that prevails, viz: that carbon directly

forms carbonic acid and leaps over all the steps referred to, which *we* assume from analogy. We know that sugar is not formed directly from starch—nor is vinegar—but by certain steps, viz: starch is converted into gum, or dextrine—and then gum is converted into glucose, or sugar—and sugar is converted into alcohol—and alcohol is converted into aldehyde—and aldehyde is converted into vinegar, or acetic acid. So, also, sulphur, by several steps, forms oil of vitriol, and nitrogen, nitric acid, step by step. All analogy is against a contrary doctrine—especially in agriculture, where, step by step the seed arrives to the perfect plant, (except, perhaps, in Kentucky and California?)

We thus can argue conveniently, if permitted to stop a moment on one of these steps—and suppose carbonic oxyde to be a very broad one, when carbon is either absolutely or relatively abundant in the soil—ergo, a tendency to form sorrel—not by the presence of oxalic acid in the soil, much less carbonic or any other acid—but the congener of oxalic acid, nascent carbonic oxyde or some quasi suboxyde of carbon, such as carburetted hydrogen, which utterly suffocates all plants superior to the oxalis acetocella and the mosses.

DAVID STEWART, M. D.

Port Penn, Del., 10th June, 1869.

For the "American Farmer."

Labor, &c., in the South.

HALIFAX, N. C., June 10, 1869,

MESSRS. EDITORS: The following letter was written in the hope of its meeting the Hon. Mr. Newton in Richmond, but reached that city too late, and was sent on to the Dead Letter Office, from which place it has not long since returned. I think the subject of such importance, that I venture to ask its publication in your influential *Farmer*. I presume Mr. Newton will not object to the publication of his name in the connection, but if you think he would, you can suppress his name:

HALIFAX COUNTY, N. C.

Hon. Willoughby Newton,
Pres't Virginia Agricultural Soc'y.

DEAR SIR: One of the objects of your Convention I suppose to be the formation of some system by which, if possible, to regulate the laboring population in our midst, so suddenly transformed from slaves into freedmen.

At present, every individual has his own special and peculiar views as to their government, and the value which he attaches to their labor; the effect of which is to produce general dissatisfaction amongst all. Here one gives, say, $150 per annum for first class laborers, whilst another gives the same price, with every Saturday afternoon, and another perhaps the same price, with an acre of land for the exclusive use of the laborer, and yet another gives all three, and so on *ad infinitum*. In each case the laborer is (in his ignorance) dissatisfied with his own contract, and thinks that of his neighbor much the best.

What a great relief it would be to the employer, and what an advantage to the laborer, if there was some uniformity in the contracts, both as to prices, labor and privileges. But it is a mistake to suppose that there can, in this matter, be any *general uniformity* or system embracing the former area of slavery. This uniformity cannot extend, and the attempt ought not to be made to extend it, beyond localities, or counties, or sections, similar in respect to soil, climate, products, and other natural peculiarities. I trust, however, that you will agree with me, that the farmers in these localities or sections should consult and agree upon some system best adapted to their peculiar position, and so by establishing uniformity in this respect, remove one of the great evils attaching to the present endless variety of systems.

But another subject of great importance, and one which I regard (if any *one* thing can be so regarded) as the root of the evil of our present system, is, that there is no authoritative or even general *standard of labor*. Every man, if he does not judge for himself, at least knows what satisfies him as first class labor. In those countries where free labor has long or always existed, the gradations of labor are well established, and a No. 1 ploughman is one who can plough so many acres per day in the best manner; a No. 1 ditcher, one who can lay off and excavate so many cubic yards of ditch per day, cut straight, and properly graded; a full day's work, for which the highest price is given in cradling wheat, is so many acres per day, cut clean and laid ready for the binder, and so on.

But how is it in Virginia and in the whole South? What *is* a full first class hand? How much land ought a man with two or four horses to break per day? How many cubic yards of ditch to excavate? How many acres

of wheat or oats to cradle, or grass to mow? How many acres of cotton to chop out, or corn to thin? or how many pounds of cotton per day to pick, to entitle him to the highest price?

The answer may be, in each individual case: "I do know how much a first rate hand ought to do." True; but how can *you* exact it, if *all* do not require it? or unless the price of wages is in proportion to the amount and kind of labor?

Or it may be said that these tasks or degrees of labor depend upon so many contingencies or circumstances, that it is almost impossible to establish any rule. But is this so? Is not the *amount* in every *kind* of labor which a first class laborer can do, rigidly fixed in every European country as well as in the Northern States? And, as a general thing, is not the price at which that labor is valued and all the gradations, degrees, and proportions, as rigidly fixed?

It is true there are contingencies and circumstances affecting the question, but they are all embraced in areas or sections of country. A day's ploughing on a rocky hill side, is a different thing from the same day's work in the level but heavy soil of the valley, and still another from that of the light sandy ridge —but still the hill side, the level, and the sandy ridge, can each have their standard of excellence and their gradations.

Until we settle this question and fix upon some rule or standard by which to judge and regulate the matter, we are at the mercy of the laborer, and are without the best means of government. To-day I have men on my farm who hired themselves to me as first rate hands—could do, as they said, "as much as any other man"—and yet now, and throughout the year, they have been doing little more than one-half as much as a first rate hand ought to do, or as some one or two of my really good hands have been doing. This is exactly the experience of all my neighbors. It is not only an imposition on me, but an injustice to those hands who really do full work. The remedy is, for the farmers, *together*, to say what should be deemed full labor for a full hand; and let this labor be exacted. Of course each man can pay what he chooses for the best labor, but he then has it in his power to make the gradations, and proportion the price paid according to the amount of labor done.

But I only intended to suggest, and find myself discussing. I trust you may deem the subject worthy of your attention, and adopt some plan which may serve as an example to other sections of the South; and with the hope that you will excuse the liberty of thus addressing you, taken by a stranger but warm admirer,

I have the honor to remain,

Most respectfully, yours,

P. M. EDMONDSTON.

For the "American Farmer."

Rot in Peaches; its Origin.

In this part of the country—Catawba Co., N. Carolina—it is very common for peaches on *some* of our trees to rot and fall off just before coming to maturity. Without supposing that this tendency in the fruit is peculiar to our locality, I must say I have been more frequently led to notice it here than in any other place where it has been my fortune to reside for any length af time. Indeed, so common has this been with us for several years past, that we have scarcely had one perfectly sound and well ripened peach from either one of four or five particular trees, while others, on the contrary, have scarcely had a rotten peach on them. This remarkable tendency of the fruit on *some* trees to decay and fall, without any assignable reason for it in either their management or position, has led me to suspect that there must be some inherent defect in such trees themselves—that they are constitutionally unsound and unhealthy, however vigorous their growth and flourishing their aspect. And this, by the way, seems to be an impression by no means peculiar to myself. The idea is often thrown out by others, that a rotting peach naturally imparts a taint of its own unsoundness to its seed, which is, as a matter of course, transmitted to the tree that springs from it, and hence that all trees springing from pits thus corrupted, will partake more or less of the condition of the original stock. Like produces like. This is a law that guides and governs all nature. It is a well established fact in the animal world; why may it not hold in the vegetable? By this law, the pit of an unhealthy peach would be just as likely to produce a constitutionally unsound tree as a consumptive parent to procreate a consumptive child, or as an animal of any kind would

be to transmit its peculiarities of form, or temper, or its tendencies to obesity or leanness to its progeny. The suggestion, in fact, seems to be intuitive, and always has been. We act upon it constantly, perhaps without considering, for one moment, why we do so. Who ever entertains the thought of breeding from an unsound, a sickly, a deformed, or bad tempered dam or sire in the animal world? Who, if he wanted a fine pointer or setter, would sire his pup by the beagle or foxhound? And, by parity of reasoning, who in his efforts to propagate fine fruit, would take his bud from a peach tree that had the yellows, or his graft from a pear tree that had the blight? Among the arguments for temperance, few, perhaps, are of greater force than the often urged fact of "*like father, like son*"—that the inebriate is well known to transmit to his descendant the unhealthiness of his own diseased body, and the viciousness of his own perverted taste. It is not easy to see why the law should not hold equally in the inanimate world as in the animate; and, if so, why we should not be governed by the same reasonings and precautions with regard to it in the one case as in the other.

All this may appear trite to the more deeply and extensively read; yet I am not aware that the question has heretofore ever been brought thus fully and distinctly out. My object is to inquire whether the question has ever been properly put to the test, and whether, if not, it is not worthy of being put. It is a little trying to one's patience to find, when the trees he has taken so much pains with for several years begin to bear, that all his fruit, or nearly all of it, rots and falls before it is ripe enough to eat, or for any other purpose than to throw to the hogs, and to reflect that his disappointment and vexation may, in all probability, be traced to carelessness in the selection of seed years gone by.

If any one can throw light upon this subject, or give good reasons for the apparently stronger tendency in the fruit of one tree to rot than in that of another, he will confer a favor on the public as well as the undersigned.

T. S. W. Mott.

Garden Farm, Catawba Co., N. C., June 10, '69.

Great strainers are often camel swallowers; and the Pharasaical mantle of superatitious austerity is very frequently a cover for a cloven foot.

Fattening Cattle in Winter and Summer.

Hugh Stevens, an experienced feeder, communicates the following to the Mark Lane Express:

The management of fattening cattle requires more skill and energy on the part of the master and more attention on the part of the servant, than any other branch of husbandry. Every stock-feeder should have a good smattering of veterinary, so as to thoroughly understand the digestive system, and to know when an animal is healthy or not, and be able to deal with slight disorders prevalent among cattle. This I have found to be of great service to myself, for, by keeping a few simple medicines and a lancet, and knowing how to use them, I have often saved an animal's life, as in many instances, I should have had six miles to send for a veterinary surgeon. There is a great diversity of opinion among graziers as to the laying on of cattle. The first and most generally adopted system is that of allotting so many cattle to a given number of acres, the animals remaining in the same field, until sold to the butcher or housed for the winter. By this method there is no expense on the cattle for attendance. The second system is that of double-stocking. By this I do not mean keeping twice the quantity of cattle on the same number of acres, but putting the whole of the cattle on half the land changing them backward and forward, according as the land becomes soiled. Cattle are naturally fastidious, and prefer their food clean. In this way you are constantly giving the animals a change, and we all know that the oftener this can be done the better they go on. I have adopted this plan myself during the last two years, and found the stock did better, and I have been able to keep more on the same quantity of land. I have even changed feeding cattle on to very poor land (which was clean) for a few days now and then to great advantage. The great rage at present is "large fields." This is well enough for tillage land, but let me have fields of not more than fourteen or fifteen acres for grazing, so as to be able to keep my stock in bounds, and change often. In every case it is highly essential that the animals should have a good supply of wholesome water. I do not approve of driving cattle to the water at stated times, for they drink more than is beneficial, and are liable to overload the stomach and cause inflammation. All pastures should be well provided with

shelter in the shape of a good hedge or plantation, as in the middle of the day the cattle are very much annoyed by heat and flies, causing them to gallop, hence putting in force a greater amount of power than necessary, and consequently, a waste of flesh takes place. The third system is the one least practiced in this county, but I am glad to say, is gradually gaining ground. I refer to soiling cattle in the house, either in courts or boxes. It applies most particularly to the arable or mixed farmer, and enables him, by judicious management, to cope with the grazier; as by growing certain green crops, such as winter and spring vetches, rye-grass, clover, &c., he can have fat stock all through the summer. In my opinion the greatest benefit to be derived from this mode is in early summer months, for cattle that have not been made fat on the winter keep. We all know that by turning a feeding beast out to grass it gets a complete check, and does not improve for at least a fortnight or three weeks; this can only be avoided by changing the food gradually. Not having any first-rate grass land, I find this system of great benefit. It enables me to keep a larger proportion of stock, and of course this means more manure, and hence more corn, and, best of all, more money in my pocket at the year's end. A farmer requires to make preparation for this system of feeding. He must provide himself with a sufficient quantity of straw for litter, or he may use with great benefit dried peat, or any other dry vegetable matter. He must also have his food coming forward for use in regular stages, so as to secure a continuous supply. It should be cut fresh at least every morning. Care should be taken to give it in small quantities, so that the animal may eat it at once, nothing being left to cause fermentation. I find it a good plan to take a little common salt either among the food or as rock salt in the manger, as it gives a tone to the stomach and assists digestion. Thus far I have spoken of summer management.

In winter there is a great difference of opinion as to which is the best of the three-systems generally adopted, viz., open courts, stall and box-feeding. For fat stock open courts are not suitable, the animal has too much exercise, and the temperature being cold and very irregular, it requires more food to sustain the body and keep up a natural heat. By the food being laid in open cribs, a great deal is wasted, especially in snowy or wet weather. There is a system still adopted among a certain class of farmers, viz., that of filling the cribs every morning with turnips, which lie exposed to the weather, and are cut at intervals during the day with a spade or some such implement. The evil is easily imagined. Another important item attending feeding in open courts is the waste in the manure. An opinion very prevalent among farmers is, that to get their straw crushed down and made thoroughly wet with rain water, is all that is required to constitute manure. Here is a great mistake; for manure should not be valued by quantity but quality, and the only pure manure is the dung and urine of the animal, with just a sufficient amount of straw to absorb it. I often see a black stream flowing away from a fold yard, and on examination find it is nothing less than the strength of the manure being carried away by the rain water. By spouting the buildings, this great evil is materially lessened.

There is a great deal to be said in favor of stall-feeding. When litter is scarce, and it will be required to fill the stomach—a great saving is effected if the stalls are boarded and properly made, for the cattle may even do without bedding. As far as my own experience goes, I find that small heifers do well in stalls, but when you come to heavier weights, especially bullocks, the cramped position they are kept in tends in a great measure to stop their growth, and beside the urine is very difficult to get away from bullocks. The saving of food is, however, very great as compared with the feeding in open courts, as the animal is not exposed to rough weather, or to being knocked about by its companions, and perhaps deprived of its legitimate share of turnips, &c.

The system of box feeding is acknowledged by most practical men to be the best, both for the well-being of the animal and the quality of the manure. It must be quite plain to any thinking man that an animal allowed to use its own pleasure in lying or standing, and also in eating, must feed quicker than in either of the other systems I have noticed. In going through my boxes at night when all is quiet, I have often been struck with the different postures of the animals. Some you would think were dead, lying stretched out at full length. This is comfort, and the more comfortable an animal is kept, the better it will pay. Ventilation should be properly attended to; there ought always to be a circulation of

pure air through the building. I have a range of twenty boxes under one roof, which were put up by the Greenwich Hospital Commissioners, under the able superintendence of their receiver, Mr. Grey, of Dilston, which I consider second to none in this district. There is an opening of the eaves the whole length of the building, which allows the fresh air to enter, and drive the foul air up to the roof, where it goes out about three feet from the top, at an aperture formed by the slates being slightly raised. This I find to be a thorough system of ventilation. The cold air does not blow upon the cattle, as it comes in above them, and there is always a fresh, sweet odor in the place, even in the middle of summer. I have observed that cattle tied by the neck seem to stand still in feeding after a certain time, but on changing them into boxes, the effect was marvelous, and I now invariably put all my cattle into a loose box for a month or six weeks before selling them. With regard to the manure made in boxes, I find wherever it is applied alongside of the ordinary manure, there is always a marked improvement in the crop.

Renewal of Pasture Grounds.

At a late meeting of the Little Falls Agricultural Club of Herkimer county, N. York, Mr. X. A. Willard spoke as follows on this interesting subject: The grass crop, he said, was without doubt the most important of any known to agriculture. It was the basis of all successful farming. This could not be otherwise, since it is the food of our most useful animals. Without it, we should soon have no stock, no manures, and as a consequence, scarcely any cultivated crop. The money value of this crop in the United States, is immense. Allen, in his work on American cattle, estimated the number of neat cattle in the States and Territories in 1867, at 28,145,240 head, and puts their value at $1,000,000,000. This is only a single item to be credited to it. If we add the annual product of the 10,000,000 of milch cows in the country, with that of the horses and sheep and wool, we shall appreciate how much of the wealth of the U. States is due to grass.

But with Herkimer county farmers who owe all of their possessions to the crop, its importance need not be discussed. The great question with us to-day and at all times must be, how can grass be made to thrive and produce most abundantly?

We have been cropping sixty years, and many pastures are deteriorating in value. Many are habitually overstocked. This exhausts its vitality, keeps the growth of the grass feeble, and not half the feed is produced that might be, if stocked lightly a year or two and the grass allowed to get a good start.—The feeble growth of the grass allows other plants to creep in, and the pastures in this way become overrun with weeds, which mature, drop their seed, become luxuriant, and impoverish the soil. The curse of American farming to-day is weeds. When they once get possession of the soil, they cling to it so tenaciously and become so formidable that the farmer is disheartened in his attempts to exterminate them, and gives up in despair.

The usual way to rid the land of weeds and noxious plants, is to break it up and thoroughly cultivate it in hoed crops. There is another way of getting rid of weeds by the use of manures and grass seed. I have frequently disposed of the daisy by the application of farm-yard dung and plaster, and afterward sowing with clover seed. This plan of treatment made the grass grow so luxuriantly as to fairly choke the daisies out.

A matter which has not received deserved attention is the top-dressing of pastures.—Plaster is excellent for this purpose, if properly used. It is a stimulant, and used for the purpose of stimulating the growth of grass is attended with the best of results. But it should be used only as a stimulant and not as a manure. The plant must have the food furnished by the decomposition and fermentation of vegetable and animal manures, or it can no more live than a man can subsist on alcohol. Stimulants arrest the waste of the tissues in the human body, and this is substantially the office performed by plaster when applied to grass, but it cannot be used as a substitute for other food.

Light lands, inclined to gravel, will be benefited by muck. The benefit of the muck will be enhanced four-fold if mixed with barnyard manure or allowed to lie exposed where it can be trampled under feet of cattle. An instance was given of excellent results produced by muck treated and applied in this way.

Rank manures produce the best results when applied early in the winter. They can then be applied with safety, for the evapora-

tion will be slight, the wash sinking into the soil, and the manure itself becoming finely dissolved, and properly fitted for the nourishment of the tender plants in the spring. The freezing and thawing, instead of injuring manure thus applied, benefits it by helping it to find its way into the earth, and among the grass roots, which feel and show its influence in the early spring, by sending up a stronger and thicker growth.

Another manure, the value of which is not properly estimated, is that prepared from bones. Phosphates are removed in large quantities from the soil of pastures devoted to dairy stock. Prof. Voelcker, the celebrated German chemist, has made an analysis of a quart of milk, placing its constituents, oil, casein, milk, sugar, phosphate, etc., in different bottles. The quantity of phosphate obtained from the experiment was sufficient to form quite a little handful. Now, if we consider the number of handfuls constantly taken from our pastures in milk every year, it will be at once apparent that the quantity must be something immense. To this must also be added the phosphates consumed in the formation of the bones of the calf. For all of this vast amount taken away no part is returned to the soil. Fattening cattle and other stock, return a large part of it in manure, but the stock to which we have referred, consume it, and return nothing. Prof. Voelcker says that phosphates are the food most fed upon by the choicest and most nutritious of the grasses. The evil result of taking such food from the soil, and not replacing it, must be apparent. The best way to replace it, is by the use of bone manure. This valuable fertilizer is to a very large extent wasted in the United States. We need bone mills in different parts of the country to which farmers can carry bones and have them ground. They could hardly fail to be profitable investments for those getting them. A method of preparing bones by decomposition was given by Mr. Willard.

Old pastures were regarded as the best for milk, both in reference to quality and quantity. This result is owing to the prevalence of the finer and more juicy grasses which are only found in such pastures. In new pastures the herbage is coarser, the grass being inferior, and the milk poorer in quality and less in quantity.

Wet pastures may be greatly improved by proper draining. Judge French says that moist lands do not need draining when the water lies more than four feet below the surface, but when not more than two and a half they need it.

Soil filled with water cannot be heated downward from the surface. Experiments have proven that ice will remain unmelted in a vessel of water made to boil by the application of heat to the surface. For draining purposes, tile were considered cheaper at $15 to $20 per thousand than stone. The drains should have a continuous fall, so as not to be be subjected to the liability of choking up.

Another method of benefiting pasture lands was to allow sheep to run with the cows. Their manure was rich, and had the advantage of being evenly distributed. The sheep will also eat grasses which cows will not. They will feed upon the tufts passed over by the cows.—*Utica Herald.*

Hints on Horse Flesh.

As five years are required for the completion of the bone structure of the horse, it is important that he be carefully used until that age. If he is early overworked, the ligaments which unite his one hundred and thirty bones are prevented from becoming sufficiently fixed to the frame, and he is dwarfed, and wears out or dies long before reaching the full twenty-five years which should be the average duration of his life and vigor. The muscles of a fine horse ought to be thick and very long; thickness ensures strength and length an extended sweep of limb.

Properly constructed harness is as essential to the comfort of a horse as easy clothes are necessary to a man. If harness is not well fitted to the form, the veins are compressed, circulation is retarded and disease ensues. When in motion, the horse regulates his centre of gravity by using his head and neck. The check rein is therefore inhuman and injurious.

If a horse is compelled to run when his head is held in a vertical position, the gravity is thrown too far back, and he advances with difficulty. The ears may be called indices of a horse's mind. Intelligent animals prick up their ears when spoken to, vicious ones throw their ears back. A blind horse directs one ear forward and one backward, and in a deaf horse the ears are without expression.

The ears of the best horses are short and wide apart; the eyes are well open, and the

forehead is broad. A broad forehead indicates good brain. The Arab says: "The horse must have the flat forehead and the courage of a bull." The horse breathes by his nose and not by his mouth; hence the nostrils should be large, so the fresh air may be taken in freely. Dealers enlarge the nostrils of their horses by artificial means. The mouth of a young horse is round; in age it becomes narrow and elongated.

The Arab says, speaking of his horse, "The first seven years are for my young brother, the next seven for myself, and the last for my enemy."

A horse has only one jugular vein, a man has only three. The withers can never be too high. The higher they are the easier the animal travels. The loins should be short, the chest square, and the shoulders well developed. The veterinary surgeon who said, "no foot, no horse," was perfectly correct. The hoof is a curious and complicated mechanism; an elastic box, which expands and contracts as the horse raises or puts down the foot. Shoeing should be done with care and skill, or the natural form of the hoof is destroyed. Above all, so noble an animal should be treated with the greatest kindness, and no pains should be spared to make his bonds as easy to wear as may be.—*Dr. Lemercier.*

The Yamoka.

This is the aboriginal name for the sweet potato, which is far more the staple plant of our region than cotton, and may be made quite as profitable to us. This name is here specially bestowed upon it as dessicated, or with all the moisture and decaying matter dried out of it, so that it can be kept for years and be carried to any quarter of the globe for use there, and be used for all purposes with as much advantage and pleasure to the user as if the potatoes were just from the ground.

We have often spoken to our readers of the great value of the sweet potato. It impoverishes the soil far less than grain crops, and is produced in far greater abundance. The exhibitor of the dried article at our fair says it yields from 15,000 to 20,000 pounds to the acre, while corn yields only from 1000 to 1200 pounds. At all events, it yields far more than the latter, and as it does not materially impoverish the soil, and prepares it for other crops, it is far more advantageous.

It is better food for horses, hogs and cows than corn or oats, and animals travel and work better when fed on it than upon corn. This was fully shown during the war. The only trouble has been that it was so difficult to keep these potatoes even during the winter; whole heaps of them, sometimes when put up, rotting away and being lost from overheating, fermenting, and rendering useless the industry of the whole season.

This is obviated by the dessicating and preserving them, as is now done by Judge Warner, formerly of Natchez, Miss., and now of Amite city, in this State, who is showing at the Fair Grounds specimens of it thus dried and preserved, so as to keep for any number of years, good, sweet and valuable as when green. All that will cause decay is gone. It can be packed in warehouses or sent abroad, or taken as ship stores or the like, with entire safety.

We can hardly estimate the advantages this will confer upon the South. Ten times as large a crop can be raised and with far less risk of loss than in corn. The surplus can be used to fatten all the animals of the farm, and an export crop prepared, which will give the people of the colder climates, where this vegetable will not grow, and our own in the warm season, when it cannot be kept over from winter, an abundance of it, clear of any tendency to spoil.

We perceive that the dessicated sweet potato has received "honorable mention" at the Fair. It deserves a medal of gold more than any hardware or silverware—whether manufactured in other States or in Europe—deserves a bronze medal. It is a step toward substantial independence for ourselves, and to the making others depend upon us, by which alone the South can hereafter expect to conquer.—*N. Orleans Picayune.*

TOADS IN GARDENS.—In a lecture on "Insect Enemies," lately delivered by Mr. Treat, before the Vineland Agricultural and Horticultural Society, the usefulness of toads in gardens was forcibly pointed out. The lecturer advised his hearers to carry all the toads they find into the garden, as they devour immense quantities of insects. A toad will swallow the largest specimen of a tomato worm, although sometimes he will have a hard time of it.—*Ex.*

SUNDAY READING.

Brethren, if it is worth our while to be Christians at all, it is worth our while to be Christians in downright earnest. Nothing is gained either in this world or in the next by being a half-Christian, who believes in those fragments of the creed which are not rejected by the irreligious opinion of the day, and who selects for practice certain duties and precepts which do not inconvenience him. In this supreme concern, as in all lesser concerns, it is simple prudence to be thoroughgoing—"to bring every thought into the obedience of Christ"—to "present our bodies a living sacrifice, holy, acceptable unto God, which is our reasonable service." It has been said that if Christians led Christian lives the world would be converted in spite of itself in the course of a few years. And certainly the most formidable opponents of Christ our Lord are not the arguments and sneers of His intellectual adversaries, nor yet the gigantic sins of those who own no allegiance to Him. His worst foes are they of His own household, who, by their sins and inconsistencies, "crucify to themselves the Son of God afresh, and put Him to an open shame."

Another reason of our superficial hold on truth is, that we Christians do not meditate. Many men only think of meditation as if it were a dreamy, listless process, unworthy of those who, as men and as Christians, have a serious work to do in life. But meditation is not Tityrus, lying at ease under the shade of a wide-spreading beech-tree; it is David, hunted for his life, yet deliberately pausing ever and anon to contemplate and to praise the Divine attributes of Justice and Mercy; it is St. Paul, spending three years as a solitary recluse in the Arabian desert, that he may be nerved with a Divine strength for the conversion of the world and for his martyrdom; it is St. John, an exile and a prisoner for the name and patience of Jesus, reading in the opened heavens the coming history of the Church. Meditation is an intense act of the whole soul moving forth to welcome and to embrace truth; it is intelligence marking out the exact limits and range of truth; it is affection embracing truth for the sake of its fair and matchless beauty; it is will, sternly resolving to express truth in act and life.—Meditation to be of real service ought to be just as regular and systematic as prayer; and when this is so, each of the great doctrines of the faith, each of the acts, and sayings and sufferings of our blessed Lord, each of the means of grace, become to the soul familiar things, and not, most assuredly, despised or thought lightly of, because familiar. Ten minutes or a quarter of an hour of meditation each day is not much for a Christian to give to God; but the man who gives even this, knows by experience at the end of a year that he has thus acquired quite a new grasp and sight of revealed truth. He sees how impossible it is to add to it, how yet more impossible to mutilate it. Between it and all other thought there is in his mind the sharpest line of demarcation. Scripture is no longer a dead letter to him, but a "living creature;" he sees in Scripture, not a mere collection of documents relating to a distant time, to events and to states of mind which here passes away, but the perpetual voice and mind of one with whom his soul holds constant communion, and in whose light he traces with clear eye the certainty and the symmetry of the faith.

Christ abolished the Ceremonial Law, but not all ceremonies. We consist of a soul and a body; and God doth convey grace unto the soul by the body, which cannot be done without ceremony. But ours were fewer in number than were the Jews, though they are not inferior in power; yea, they are much more commodious, though they are less burdensome. Our charge being easier, and our comfort greater, our sin is less excusable, and our neglect more challengeable, if we do not practice such easy means to compass so great a benefit.

S. Augustine asks the question, why in the Scripture we are commanded to love God and our neighbour, but we find no commandment to *love ourselves?* And he gives this answer to the question: that in the command of loving God is necessarily implied a command to love ourselves. *Finqi non potest major dilectio sui, quam dilectio Dei.* How can we better love ourselves than by loving Him, that is the Beatifical Good, and can make us blessed, the knowing and loving of whom is eternal life?

We should not curiously seek to know where the fire of hell is situated; but should rather ask, by what means it may be escaped.

☞ **Persons ordering Goods of our advertisers will confer a favor by stating that they saw the advertisement in the "American Farmer."**

WORTHINGTON & LEWIS,
Publishers.

Baltimore Markets, June 26, 1869.

COFFEE.—Rio, 16½a17¾ c., gold, according to quality: Laguayra 16a18¼ cts., and Java 22a23¼ cts., gold

COTTON.—We quote prices as follows, viz:

Grades.	*Upland.*	*Gulf.*
Ordinary	27 a28	00
Good do	29 a30	00
Low Middling	32 a32¼	00
Middling	32¾a—	00

FERTILIZERS.—Peruvian Guano, $85; California $70; Redunda Island, $30; Patapsco Company's, $60; Reese & Co's Soluble Pacific Guano, $60; Navassa Guano, $30; Chesapeake Guano, $60; Flour of Bone, $60; G. Ober's (Kettlewells) AA Manipulated, $70; A do. $60; Ammoniated Alkaline Phosphate, $55; Alkaline Phos. $45; Baltimore City Company's Fertilizer, $40; do., Flour of Bone, $60; do., Ground Bone, $45; do., Poudrette, $25; Baugh's Raw-bone Phosphate, $56; Baugh's Chicago Bone Fertilizer $48; Baugh's Chicago Blood Manure, $48; Maryland Powder of Bone, $48; Rhodes' Super Phosphate, $50; Rhodes' Orchilla Guano, $30; Lister's Bone Super-Phosphate $55; Berger & Buts's Super-Phosphate of Lime, $56; Andrew Coe's Super-Phosphate of Lime, $60; Zell's Raw Bone Phosphate, $56; Zell's Super-Phosphate of Lime, $60—all per ton of 2 000 lbs.; Pure Ground Plaster, $14.75 per ton, or $2 25 per bbl. Shell Lime slaked, 6c., unslaked, 10c per bushel, at kilns.

FLOUR.—Howard Street Super, $5.25a5 50; High Grades, $6.75a7.25; Family, $8.00 a 9.00; City Mills Super, $5.00a6.25; Baltimore Family, $12.00.

Rye Flour and Corn Meal.—Rye Flour, $6.00a6.25; Corn Meal, $4 50

GRAIN.—*Wheat.*—Good to prime Red, $1 50a1.60; White, $1.50a1.55.

Rye.—$1.30a1.35 per bushel.

Oats.—Heavy to light—ranging as to character from 55a80c. per bushel.

Corn.—White, $0.90a0.95; Yellow, $0 82a0.85 per bushel.

HAY AND STRAW.—Timothy $24a25, and Rye Straw $23 per ton.

PROVISIONS.—*Bacon.*—Shoulders, 15a15¼ cents; Sides, 18a18¼ cts.; Hams, Baltimore, 20a22 cts. per lb.

SALT.—Liverpool Ground Alum, $1.80a1.90; Fine, $2 70 a2.90 per sack; Turk's Island, 50 cts. per bushel.

SEEDS.—Timothy $—a—; Clover $—.—a—.—; Flax $2.55.

TOBACCO.—We give the range of prices as follows:

Maryland.	
Frosted to common	$4 00a 5.00
Sound common	5.50a 6.50
Middling	8.00a10.00
Good to fine brown	11 00a15.00
Fancy	17.00a30 00
Upper country	7.00a35.00
Ground leaves, new	3.00a12.00
Ohio.	
Inferior to good common	4.00a 6.00
Brown and greenish	7.00a 8.00
Medium to fine red and spangled	9.00a13.00
Fine spangled	12 00a25.00
Fine yellow and fancy	30.00a40.00

WOOL.—We quote: Unwashed, 25a30 cts.; Tub-washed, 40a50 cts.; Pulled 30a35 cts.; Fleece 42a45 cts. per lb.

CATTLE MARKET.—Common, $5 00a6.00; Good to fair, $7.00a8.00; Prime Beeves, $8.00a9.50 per 100 lbs.

Sheep—Fair to good, 6a8¼ cts. per lb., gross.
Hogs—$13.75a14.75 per 100 lbs., net.

Wholesale Produce Market.

Prepared for the American Farmer by HEWES & Co., *Produce and Commission Merchants, 67 Exchange Place.*

BALTIMORE, June 26, 1869.

BUTTER.—Western solid packed 28a32 cts.; Roll 30a35; Glades,—a—; Goshen, 41a44; New York 38; Franklin street 25; for regular lots.

BEESWAX—45a— cts.

CHEESE.—Eastern, 20a22; Western, 19 to 21 cts.

DRIED FRUIT.—Apples, 13a15; Peaches, 12a25.

EGGS—24a25 cents per dozen.

FEATHERS.—Live Geese, — to — cents.

LARD.—Western, 20; City rendered, 21 cts.

TALLOW.—11a12 cents.

POTATOES.—Old, 65a75 cts.; New 75a1.00 per bushel.

NEW ADVERTISEMENTS—JULY.

List of Premiums—Maryland Agrl. Society.
Antidote for Tobacco—E. Douglass.
Victor Cane Mill—Blymyer, Norton & Co.
Sorghum Refining—Clough Refining Co.
Tobacco Firing Apparatus—Bibb & Co.
Lettuce—M. O'Keefe Son & Co.
Builders Materials—Will C. Hutchens.
Jewelry &c.—Canfield Bro, & Co.
Pigs and Fowls—Thos. B. Smith.
Fowls for sale—J, E. B.—"American Farmer" Office.
Prairie Whistler—T. W. Valentine.
Cigars—G H. Bolenius.
Vinegar—F. I Sage.

Contents of July Number.

Work for the Month	1
The Vegetable Garden	3
The Flower Garden	3
The Fruit Garden	3
How to Preserve and Increase Manure	4
Green Crops and Irrigation	5
Stagnant Water Causing Abortion in Cows and Mares	6
Working Bulls	6
Fifty Per Cent. of Clear Profit	7
Varieties of Food and their Nutritive Value	9
Starting an Apiary	10
Diseases of Hogs, etc	11
Weaning Colts	12
Feeding Long Wooled Sheep	13
Training Tomato Vines	14
Pigs in Summer	15
Dr. Voelcker on Hay-Making	15
Usefulness of Willows	16
When to Cut Hay	17
A New Volume.—State Ag Society	18
To Get up a Flock of Sheep	19
Of Moles and Other Country Friends	21
Early Tobacco Plants	22
Book Notices	23
Mowing and Reaping	23
"Will Lime Kill Sorrel?"	23
Labor, &c., in the South	25
Rot in Peaches; its Origin	26
Fattening Cattle in Winter and Summer	27
Renewal of Pasture Grounds	29
Hints on Horse Flesh	30
The Yamoka	31
Sunday Reading	32

List of Premiums and Rules and Regulations

OF THE

FIRST FAIR

OF THE

MARYLAND

State Agricultural and Mechanical Association,

AT THEIR FAIR GROUNDS,

AT PIMLICO, NEAR BALTIMORE,

To Commence Tuesday, Oct. 26th, 1869, and continue Four Days.

Class I.—CATTLE.

Herd Premiums.

[A herd to consist of 1 Bull and 4 Cows or Heifers.]

For the best Short Horn Herd,	$100
Devon "	100
Alderney, Jersey or Guernsey,	100
Hereford	100
Ayrshire	100

Awarding Committee.—Hon J. T. Earle, Queen Anne Co., C. K. Thomas, Frederick Co., James H. Bradley, Montgomery Co., Amos E. Kapp, Presd't Penna. Ag. Society, R. Tilghman Goldsborough, Dorchester county.

Sweepstakes.

For the best and largest herd of any pure breed not less than ten, owned by the Exhibitor, $200

Awarding Committee.—Col. Horace Capron, Washington, D. C., Gen'l Tench Tilghman, Talbot Co., Col. G. W. Peter, Ellicott city, Col. Robert L. Baker, Frederick Co., Va., Presd't Shenandoah Valley Ag. Society, hlt J. Henkle, Presd't Anne Arundel Co. Ag. Society, C. K. Thomas, Frederick Co., Augustus J. Albert, Baltimore city.

Imported Cattle.

[Under this head are included calves dropped in the United States, but which were "*in utero*" when their mothers were imported.]

For the best Short Horn Bull,	$50
Devon "	50
Alderney, Jersey or Guernsey,	50
Hereford,	50
Ayrshire,	50
For the best Short Horn Cow or Heifer,	30
Devon "	30
Alderney, Jersey or Guernsey,	30
Hereford,	30
Ayrshire,	30

Awarding Committee.—Hon. Oden Bowie, George Patterson, Carroll Co., Dr. L. H. Twaddell, Philadelphia, Col. M. Harman, Staunton, Va., Thomas Hughlett, Talbot Co., Dr. Richard S. Turpin, Centreville, Queen Anne Co., Johns Hopkins, Baltimore city.

AMERICAN BRED CATTLE.

Short Horns.

For the best Bull 3 years old,	$50
2d do do	25
For best Bull between 2 and 3 years old,	20
2d do do	10
For best Bull between 1 and 2 years old,	20
2d do do	10
For the best Bull Calf,	10
For the best Cow 3 years old,	30
2d do do	20
3d do do	10
For the best Heifer between 2 and 3 years old,	20
2d do do	10
For the best Heifer Calf,	10

Awarding Committee.—Col. Ramsay McHenry, Harford Co., David C. Trimble, Talbot Co., Outerbridge Horsey, Frederick Co., Robert Fowler, Baltimore county, Andrew J. Pennington, Cecil Co., P. H. Walker, Baltimore Co., David C. Blackiston, Kent Co.

Devons.

For the best Bull 3 years old,	$50
2d do do	25
For the best Bull between 2 and 3 years old,	20
2d do do	10
For the best Bull between 1 and 2 years old,	20
2d do do	10
For the best Bull Calf,	10
do Cow, 3 years old,	30
2d do do	20
3d do do	10
For best Heifer between 2 and 3 years old,	20
2d do do do	10
For best Heifer Calf,	10

Awarding Committee.—Col. Edward Lloyd, Talbot Co., George E. Brooke, Montgomery Co., Col. Francis S. Jones, Frederick Co., William Colder, Harrisburg, Pa., J. E. Coad, St. Mary's Co., George K. Austin, Presd't Dorchester Ag. Society, George Appold, Baltimore city.

Alderneys, Jerseys or Guernseys.

For the best Bull, 3 years old, $50
2d do do do 25
For the best Bull between 2 and 3 years old, 20
2d do do do do do 10
For the best Bull between 1 and 2 years old, 20
2d do do do do do 10
For best Bull Calf, 10
Cow, 3 years old, 30
2d do do do 20
3d do do do 10
For the best Heifer between 2 and 3 years, 20
2d do do do do 10
For the best Heifer Calf, 10

Awarding Committee.—George S. Brown, S. T. C. Brown, Carroll county, Clement Hill, Prince George's county, John Loats, Frederick Co., Capt. Thomas Love, Baltimore Co., Col. F. S. Jones, Liberty, Frederick Co, Col. R. H. Dulany, Loudon Co., Va.

Herefords.

For the best Bull, 3 years old, $50
2d do do do 25
For the best Bull between 2 and 3 years old, 20
2d do do do do do 10
For the best Bull between 1 and 2 years old, 20
2d do do do do do 10
For the best Bull Calf, 10
do Cow, 3 years old, 30
2d do do 20
3d do do 10
For best Heifer between 2 and 3 years old, 20
2d do do do do do 10
For best Heifer Calf, 10

Awarding Committee.—Col. W. D. Bowie, Prince George's Co., Hon. John Lee Carroll, Howard Co., Cornelius Staley, Frederick Co., Dr. Wm. H. DeCourcy, Queen Anne Co., Charles Sharpless, Philadelphia, James Tilghman of John, Queen Anne Co., R. R. Kirkland, Baltimore city.

Ayrshires.

For the best Bull, 3 years old, $50
2d do do 25
For the best Bull between 2 and 3 years old, 20
2d do do do do 10
For the best Bull between 1 and 2 years old, 20
2d do do do do 10
For the best Bull Calf, 10
do Cow, 3 years old, 30
2d do do 20
3d do do 10
For the best Heifer between, 2 and 3 years old, 20
2d do do do do 10
For the best Heifer Calf, 10

Awarding Committee.—William C. Wilson, Samuel Sharpless, Philadelphia, Wm. M. Knight, Cecilton, Cecil Co., John W. Jenkins, Port Tobacco, Charles Co., Dr. George R. Dennis, Somerset Co., T. J. Taylor, Baltimore Co., Geo. Spencer, Galena, Kent county.

Grades or Natives.

For the best Cow. $20
2d do 10
For the best Cow or Heifer between 2 and 3 years, 10
2d do do do do 5
For the best Cow or Heifer between 1 and 2 years, 10
2d do do do do 5
For the best Calf, 5

Awarding Committee.—George R. Dennis, Frederick Co., E. L. F. Hardcastle, Talbot Co., William B. Stephenson, Hopewell X Roads, Harford Co., Henry O. Devries, Marriottsville, Howard Co., Andrew A. Chapman, Port Tobacco, Charles Co., Wm Grason, Cambridge, Dorchester Co., R. D. Johnson, Cumberland, Alleghany county.

Fat Cattle.

For the best Beef on the hoof, $20
2d do do 10

Awarding Committee.—Henry Carroll, Phœnix, Baltimore Co, E. G. Ulery, Baltimore Co., Lewis Meyers, Baltimore city, John R. Street, Taylor P. O., Harford Co., Howard Griffith, Poolesville, Montgomery Co., John H. Tolling, Baltimore Co., Lewis Turner, Jr., Baltimore Co.

Working Oxen.

For the best Yoke, $30
2d do 10

Awarding Committee.—Noah Walker, Baltimore Co., Dr. S. P. Smith, Cumberland, Alleghany Co., Jacob Rudy, Middletown, Frederick Co., John A. Dorsey, Roxbury Mill, Howard Co., Nicholas Norris, Freedom, Carroll Co., Beverly Randolph, Virginia, Dr. F. P. Phelps, Cambridge, Dorchester Co.

Class II.—SHEEP.

[*Long Wools* include Cotswolds or New Oxfordshires, Leicester or Bakewells and Lincolnshires.
Middle Wools include South Downs, Shropshire Downs, Wiltshire or West Country Downs, and other Down breeds.
Fine Wools include French and Spanish Merinos and Saxony.]

IMPORTED SHEEP.

Long Wools.

For best Buck, $15
2d do 10
For best Ewe, 15
2d do 10

Middle Wools.

For best Buck, $15
2d do 10
For best Ewe, 15
2d do 10

Fine Wools.

For best Buck, $15
2d do 10
For best Ewe, 15
2d do 10

Awarding Committee.—W. Wilkins Glenn, Baltimore city, Chas. B. Calvert, Hyattsville, Prince George's Co., William T. Goldsborough, Cambridge, Dorchester Co., Dr. R. S. Stewart, Anne Arundel Co., William Dodge, Hagerstown, Washington Co, Samuel Sutton, St. Dennis P. O., Baltimore Co., George Jackson, Wilmington, Del.

AMERICAN BRED SHEEP.

Long Wools.

For the best Buck, $15
2d do 10
For the best pen of Ewes not less than 3, 10
2d do do do 10
For the best pen of Buck Lambs not less than 3, 10
For the best pen of Ewe Lambs not less than 3, 10

Awarding Committee.—Col. J. W. Ware, Virginia, A. S. Abell, Baltimore city, A. H. Stump, Baltimore county, W. L. Fendall, Fallston, Harford Co., Daniel Field, Denton, Caroline Co., Dr. Thomas Kennard, Harmony, Kent Co., Joseph E. Muse, Cambridge, Dorchester Co.

Middle Wools.

For the best Buck, $15
2d do 10
For the best pen of Ewes not less than 3, 15
2d do do do do 10
For the best pen of Buck Lambs do 10
do do Ewe do 10

Awarding Committee.—John Gale, Hainesville, Kent Co., Alexander D. Brown, Brooklandville, Richard C. Hollyday, Talbot Co., Samuel K. George, Jr., Howard, Co., Sam'l W. Worthington, Cockeysville, Baltimore Co., Wm. E. Hooper, Baltimore, John Wethered, Baltimore county.

Fine Wools.

For the best Buck, $15
2d do 10
For the best pen of Ewes not less than 3, 15
2d do do do 10
For best pen of Buck Lambs not less than 3, 10
2d do Ewe do do 10

Awarding Committee.—Judge W. Viers Bouic, Rockville, Montgomery county, Clinton Johnston, Liberty, Frederick Co., James Mullikin, Collington P. O., Prince George Co, Thos. C. Graham, Calvert Co., Dr. Broome, St. Mary's Co., P. Perine, Patterson's Wills, Washington Co., Penn., Robert Wylie, Baltimore Co.

Fat Sheep.

For the best live Mutton, $10
2d do do 5
For the best slaughtered Mutton, 5
2d do do 3

Awarding Committee.—Charles Carter, Prince George's Co., Dr. J. L. Adkins, Talbot Co., Jas. Webb, Baltimore city, Frank Sullivan, do. Genl. Edward Shriver, Frederick Co., Thomas Godman and Samuel Oler, Balto. city.

Class III.—SWINE.

[*Large Breed* includes Chester, Berkshire, Hampshire and their grades. *Small Breeds* includes Neapolitan. Suffolk, Improved China, Essex, Chinese, Mocha and their grades.]

Large Breed.

For the best Boar over 2 years old, $10
2d do do 5
For the best Boar between 1 and 2 years, 10
2d do do do 5
For best Boar between 6 months and 1 year, 5
For the best Sow over 2 years, 10
2d do do 5
For the best Sow between 1 and 2 years, 10
2d do do do 5
For best Sow between 6 months and 1 year, 5
For best lot of pigs (not less than 5) not less than 6 months old. 5

Awarding Committee.—Philip T. George, Baltimore Co., G. W. Manro, Freedom, Carroll Co., Jas H. Steele, Carroll county, Nathan M. Hobbs, Roxbury Mill, Howard county, Joseph Judik, Baltimore city. Samuel Wilhelm, Baltimore county, Thomas H. Mules, Baltimore city.

Small Breed.

For the best Boar over 2 years old, $10
2d do do do 5
For the best Boar between 1 and 2 years old, 10
2d do do do 5
For best Boar between 6 months and 1 year, 5
do Sow over 2 years old, 10
2d do do do 5
For the best Sow between 6 months and 1 year, 5
For the best lot of Pigs (not less than 5) not less than 6 months old, 5

Awarding Committee.—Judge Aaron Hoffman, Baltimore city, Richard T. Bentley, Sandy Spring, Montgomery Co, William Trimble, Magnolia, Harford county, James H. Legg. Annapolis, Md., Cary McClelland, Baltimore city, Cardiff Taggart, Baltimore county, Capt. R. Harrington, Talbot Co.

Class IV.—HORSES.

Blooded Horses.

[The Pedigree must be satisfactory to the Awarding Committee.]

For the best Thorough-Bred Stallion, $100
2d do do do 50
For the best do do Mare, 50
2d do do do 25
For the best Horse Colt, 3 years old, 50
2d do do do 25
For the best Horse Colt, 2 years old, 40
2d do do do 20
For the best Horse Colt, 1 year old, 30
2d do do do 15
For the best sucking Horse Colt, 10
For the best Filly, 3 years old, 30
2d do do 20
For the best Filly, 2 years old, 20
2d do do 10
For the best Filly, 1 year old, 15
2d do do 5
For the best sucking Filly, 10

Awarding Committee—J. Howard McHenry, Baltimore Co, J. Rousby Plater, Talbot Co., Charles Ridgely, Baltimore Co., Charles Wheatly, New York, Severn Eyre, Eastville, Northampton Co., Va., Col John R Emory, Centreville, Queen Anne Co., H. L. Dangerfield Lewis, Clarke Co., Va.

Quick Draft Horses.

For the best Stallion, $100
2d do 60
For the best Mare, 50
2d do 25
For the best Horse Colt, 3 years old, 50
2d do do do 25
For the best Horse Colt, 2 years old, 40
2d do do do 20
For the best Horse Colt, 1 year old, 30
2d do do do 15
For the best sucking Horse Colt, 10
For the best Filly, 3 years old, 30
2d do do 20
For the best Filly, 2 years old, 20
2d do do 10
For the best Filly, 1 year old, 15
2d do do 5
For the best sucking Filly, 10
For the best Pair of Horses, raised by exhibitor, 50

Awarding Committee.—Hon. Odin Bowie, Geo. H. Morgan, Morganza, St. Mary's Co., Col. W. H. DeCourcy, Queenstown, Queen Anne Co., Robert M. Dennison, Baltimore city, Samuel M. Shoemaker, Baltimore city. W. H. Perot, Baltimore, C. Oliver O'Donnell, Baltimore city.

Horses for General Utility.

For the best Stallion,	$50
2d do	20
For the best Brood Mare,	30
2d do do	15
For best pair matched Coach Horses,	50
2d do do do	20
For best pair matched Coach Horses raised by the exhibitor,	50
For the best Gentleman's Saddle Horse, Mare or Gelding,	30
2d do do do	20
For the best Lady's Saddle Horse, Mare or Gelding,	30
2d do do do	20

Awarding Committee.—George W. Riggs Washington, D. C., Wm. H. Graham, Baltimore city. Gen'l J. S. Berry, George Small, C. M. Dougherty, A. A. Chapman, J. Rob't Jenkins, Baltimore city.

Heavy Draft Horses.

For the best Stallion,	$50
2d do	25
For the best Mare,	30
2d do	15
For the best Horse Colt, 3 years old,	25
2d do do do	15
For the best Horse Colt, 2 years old,	20
2d do do do	10
For the best Horse Colt, 1 year old,	10
2d do do do	5
For the best Filly, 3 years old,	20
2d do do	10
For best Filly, 2 years old,	15
2d do do	5
For best Filly, 1 year old,	10
For best Team, not less than 4,	40
For best Pair,	20

Awarding Committee—Wm. T. Walters, J. Carroll Walsh, Jerusalem Mills, Harford Co., Walter Dorsey, Howard Co., Hen y Carroll, Jr., Phœnix, Baltimore Co., Martin Goldsborough, Baltimore city, Wm. T. Vickers, Dorchester Co., Col. R. W. Hunter, Winchester, Va.

Imported Horses.

For the best Thorough-Bred Stallion,	$100
2d do do do	50
For the best Thorough-Bred Mare,	50
2d do do do	25
For the best Quick Draft Stallion,	100
2d do do do	50
For the best Mare,	50
2d do	25
For the best Stallion, General Utility,	50
2d do do do	20
For the best Brood Mare, General Utility,	30
2d do do do do	15
For the best Stallion, Heavy Draft,	50
2d do do do	25
For the best Mare, do do	30
2d do do do	15

Awarding Committee—John Merryman. Col. J. W. Ware, of Clarke Co., Va., Col. F. S. Jones, Frederick Co., Hon. James H. Grove, Hagerstown, Amos E Kapp, President Pennsylvania State Agricultural Society, Frank Newcomer, George P. West, Baltimore city.

Sweepstakes for Stallions.

For that Stallion in any class of whose get the greatest number of superior colts, (not less than seven) shall be exhibited.

Awarding Committee.—Same as last preceding.

Jacks, Jennets and Mules.

For the best American Bred Jack,	$25
2d do do do	15
For the best American Bred Jennet,	20
2d do do do	10
For the best Imported Jack,	50
do do Jennet,	25
For the best pair of Mules,	20
2d do do	10
For the best team of Mules, not less than 4,	40

Awarding Committee.—John B. Thomas, Buckeystown, Frederick Co., Gen'l James C. Clarke, Cockeysville, Baltimore Co., Joseph H. McGee, Balto. city, P. A. Small, York, Pa., Jervis Spencer, Kent Co., Thomas Craddock, Pikesville, Baltimore Co., George Henderson, Jr., Alleghany Co.

TRIALS OF SPEED.

To take place each day at 2 o'clock, P. M.

[An entrance fee of ten per cent. will be charged on all horses entering into competition in these trials.]

26th OCTOBER--Tuesday.

First Day.

For the fastest trotting Mare, Stallion or Gelding in harness, (Mile Heats, best three in five.)

For the fastest,	$350
For the next,	100
For the third,	50

For the two fastest Double Teams, owned in Maryland, (both horses to belong to the exhibitor) Mile Heats, best two in three.

For the fastest Double Team, *A Silver Pitcher* valued at	$200
For the next fastest Double Team, *A Silver Goblet* valued at	$100

Awarding Committee.—Josiah Lee Johnson, E. W. Jenkins, Frank M. Hall, of Prince George's Co., Alexander D Brown, James Hodges. Malcom Crichton, Baltimore city, William T. Preston, Frederick Co.

27th OCTOBER--Wednesday.

Second Day.

For the fastest Mares, Stallions or Geldings of those exhibited *which have never beaten* 2.25 *in public.* Mile Heats, best two in three in Harness.

For the fastest Mare, Stallion or Gelding,	$250
For the next fastest do do	125

For the fastest Mares, Stallions or Geldings of those exhibited *which have never beaten* 3m. *in public.*

For the fastest Mare, Stallion or Gelding,	$200
For the next do do do	100

Mile Heats, best two in three in Harness.

Awarding Committee.—George S. Brown, C. Oliver O'Donnell, J. Philip Roman, Cumberland, Chas. M. Dougherty, Gen'l Anthony Kimmel, Frederick Co., J. D. Kremelberg, Allen Dodge, Georgetown D. C.

28th OCTOBER--Thursday.

Third Day.

For the fastest trotting Stallion bred in Maryland,	$200
For the next fastest do do do	100

Mile Heats, best two in three in Harness.

For the *fastest Mare or Gelding*, bred and reared in Maryland, $200
For the next fastest Mare or Gelding, bred and neared in Maryland, 100
Mile Heats, best two in three in Harness.

Awarding Committee.—Louis McLane, Saml. K. George, Wm. H. Graham, Walter B. Brooks. Frank Sullivan, Dr. J. J. Moran, and Thomas Kensett, Baltimore Co.

29th OCTOBER--Friday.

Fourth Day.

For the fastest Thorough-Bred Mare, Stallion or Gelding under the Saddle. Mile Heats, best two in three, subject to the Rules and Regulations adopted by the old Maryland Jockey Club.

For the fastest Thorough-Bred, $300
For next do do 150
For third do do 50

Racking.

For the fastest Racking Mare, Stallion or Gelding under the Saddle, $100
For next do 50
For third do 25
Mile Heats, best two in three

Awarding Committee.—Jos. H. Rieman, E. M. Greenway, Jr., N. G. Penniman, Jesse Tyson, J. Stricker Jenkins, A. F. Fawcett, E. A. Clabaugh, Balto.

Class V.

Poultry and other Birds.

For the best Collection exhibited, $20
2d do do 10

[A trio shall consist of 1 Cock and 2 Hens, over one year old.]

For the best trio of Shanghais, (any color,) 2
2d do do do 1
For the best trio of Bucks County Fowls, 2
2d do do do 1
For the best trio of Jersey Blues, 2
2d do do do 1
For the best trio of Malays, 2
2d do do 1
For the best trio of Dorkin, (either color,) 2
2d do do do 1
For the best trio of Games, 2
2d do do 1
For the best trio of Black Spanish, 2
2d do do do 1
For the best trio of Black Spanish, under one year, 2
For the best trio of Polands or Top-Knots, 2
2d do do do 1
For the best trio of Hamburgs, (any color,) 2
2d do do do 1
For the best trio of Seabright Bantams, 2
2d do do do 1
For the best trio of other Bantams, 2
For the best trio of Dunghills, 2
For the best pair of Turkeys, 2
2d do do 1
For the best pair of Geese of any kind, 2
2d do do do 1
For the best pair of Rouen Ducks, 2
2d do do do 1
For the best pair of Aylesbury Ducks, 2
2d do do do 1
For the best trio of Guinea Fowls, 2
2d do do do 1
For the best collection of Pigeons, 3
For the best three Capons, 3
For the best three Caponed Turkeys, 3
For the best pair of Imported Fowls, 3

Awarding Committee,—Cbauncy Brooks, Alfred Jenkins, Augustus J. Albert, John R. Clark, Ellicot city, Lawrence J. Brengle, Frederick city, ——— Rose, Talbot county Micajah Rogers, Pikesville, Baltimore county.

Bees and Honey.

For best 10 pounds of Honey in the Comb, 5
For the best Hive filled with Bees and their Honey in the Comb, 5
For the best Hive of Italian Bees, 3
For best Hive of Bees with Movable Combs, 3

Awarding Committee.—Dr. Eli J. Henkle, Anne Arundel county, William Webster, Cockeysville, R N. Elder, Pikesville, W. C. Wilson, Balt. county, Dr. S. P. Smith, Cumberland, Judge R. B. Carmichael, Queen Anne Co., Carroll Spence, Baltimore county.

[The honey must be taken without destroying the bees and the kind of hive used, and the general management must be stated in writing.]

Butter and Cheese.

For the best Fresh Butter, not less than 5 pounds, made and printed by the exhibitor, $5
For the 2d best Fresh Butter, not less than 5 pounds, made and printed by the exhibitor, 3
For the best firkin or tub of Salted Butter, not less than 6 months old, made and put up by the exhibitor, 3
For the best Cheese, not less than 25 pounds, made by the exhibitor, 5
For the best Cream Cheese, not less than 5 pounds, 3

Awarding Committee.—Dr. N. R. Smith, Jno. H. Sotheron, St. Mary's Co., Wm. H. Gatchell, Baltimore city, B. Rush Roberts, Sandy Spring, Montgomery Co., Robert Wylie, Baltimore Co., P. F. Thomas, Talbot Co., Daniel Dorsey, Baltimore city.

[The method of making the Butter and Cheese and the kind of Churn used in making the Butter must be stated in writing by each exhibitor.]

Bacon Hams.

For the best Ham, cured by the exhibitor, $5
2d do do do 3
3d do do do 2

[The Hams must be cooked with the skin on, and must be each accompanied by a written statement of the process or recipe used by the exhibitor in curing.]

Awarding Committee—N. B. Worthington, Anne Arundel Co, W. J, Rieman, Baltimore, G. Cassard, Baltimore, Philip T. George, James H. Barney, Baltimore, James D. Gilmour, Eutaw House, Baltimore, O. A. Kirkland, Gilmor House.

Class VI.—FARMS.

For the best managed and cultivated Farm, $100
2d do do do 50

Awarding Committee.—David W. Nail, Sam's Creek, Frederick Co., A. B Davis, Montgomery Co, Edward Stabler, Sandy Spring, Montgomery county, Capt. Thos. Lucas, Reisterstown, Wm. Knight, Cecilton, Cecil Co., Thos. R. Hollyday, Easton, Talbot county, A. Hamilton Stump, Baltimore county.

Agricultural Productions.

Tobacco.

For the best sample, $20

Awarding Committee.—A. Schumacher, N. B. Worthington, Anne Arundel county, Truman Belt, Henry C. Gaither, Union Mills, Frederick county, G. W. Gail, G. O. Gorter, G. S. Watts, Baltimore city.

GRAIN AND ROOT CROPS.

For best sample Wheat not less than 1 bush., $3
White Corn, do 3
Yellow Corn, do 3
Rye, do 3
Barley, do 5
For best 5 acres of Corn, do 15
Wheat, do 15
Rye, do 10
Oats, do 10
Barley, do 10
Clover Hay, do 10
Hay other than Clover, 10
For the best 3 acres Irish Potatoes, 10
2 acres Sweet, do 5
½ acre Ruta Baga, 3
½ acre Mangel Wurzel, 3

Awarding Committee.—Israel M. Parr, Walter Mitchell, Charles county, Davis Richardson, Buckeystown, Frederick county, Richard Cromwell, Jr., Anne Arundel Co, Col. James Wallace, Cambridge, Dorchester Co., Gen. Geo. W Hughes, Anne Arundel Co., William. Goldsborough, Easton, Talbot Co.

GARDEN VEGETABLES.

For the best and largest assortment, $20
2d best do do 15
For the best 12 Long Blood Beets, 1
do do Turnip Beets, 1
For the best 6 heads of Cauliflower, 2
do do do Brocoli, 1
do do do Cabbage, 1
For the best 24 Carrots, 1
do do Parsnips, 1
For the best 6 Egg Plants, 1
do peck of Onions, 1
do bushel Sweet Potatoes, 1
do 2 Pumpkins, 1
do 2d best 2 Pumpkins, 1
do do 4 Winter Squashes, 1
do peck of Tomatoes, 1
do dozen roots of Celery, 1

Awarding Committee.—Thos. Kensett, Chas. L. Rogers, Pikesville, James Pentland, Baltimore city, Grayson Eichelberger, Frederick Co., John M. Orem, Robert Wylie and Jesse Slingluff, Baltimore county.

FRUITS.

For the largest and best Fruit Farm, $10
For the best and most varied collection of Fruit on one farm, 10
For the largest and best collection of Fruits, 20
do 2d do do do 15
For the best 6 varieties of Fall Apples, not less than 5 of each, 2
For the best 6 varieties of Winter Apples, not less than 5 of each, 2
For the best and largest collection of Apples, 5
2d do do do 2
For the best 6 varities of Fall Pears, not less than 5 of each, 4
For the best 4 varieties of Winter Pears, $4
For the best and largest collection of Pears, 6
2d do do do 4
For the best and largest collection of Native Grapes, 6
For the best and largest collection of Grapes raised under glass, 5
For the 2d best and largest collection of Grapes raised under glass, 3
For the best new native hardy seedling Grape (not less than 4 bunches) introduced within the past 2 years, 2
For the best collection of Peaches—not less than half a peck of each variety, 5
For the best late variety of Peach, not less than half a peck, 2

Awarding Committee.—Hamilton Caughy, W. D. Bowie, Jr., Croom, Prince George's county, L. T. Williamson, F. L. Morling, Baltimore county, John Feast, Robert Halliday, Charles L. Reese, Baltimore city.

FLOWERS.

Plants in Flower.

For the largest and most select collection, $5
2d do do do 3
For the best and largest amateur collection of Roses, 2
2d do do do 1
For the best and largest nurseryman's collection of Roses, 2
2d do do do 1
For the best 3 varieties of Dahlia, 1 each, 1
do 6 do Fuchsia, 1 each, 2
do collection of Geraniums and Pelargoniums, 2
2d do do do 1
For the best 12 varieties of Verbena, 2
2d do do do 1

Awarding Committee.—Wm. C. Wilson, Edward Kurtz, Andrew Hack, Baltimore city, Wm. Fowler, Baltimore city, Charles Campbell, Baltimore city, A. Pracht, Baltimore city, J. J. Wight, Cockeysville, Baltimore county.

Cut Flowers, and Floral Designs.

For the best collection of cut Flowers, $2
2d do do do 1
For the best collection of Dahlias, 2
2d do do do 1
For the best collection of Roses, 3
2d do do 2
For the best original Decorative Design, 5
2d do do do 3
For the best Basket with Flowers, 2
2d do do do 1
For the best Vase with Flowers, 2
2d do do 1
For the best pair round hand Bouquets, 3
2d do do do 2
For the best round Bridal Bouquet, 2
2d do do do 1

[Articles in the foregoing class of Flowers, will be under the control of the Committee of Arrangements from the beginning to the close of the Fair, but exhibitors have the right to arrange their display according to their own taste after their respective positions have been assigned them.]

Awarding Committee.—Mrs. George S. Brown, Mrs. Chas. Ridgely, of Hampton, Miss Perine, Miss Belle Devries, Mrs. J. Hanson Thomas, Mrs. J. J. Wight, Miss Bettie Merryman, Mrs. Col. F. S. Jones, Frederick county. Marshal to the Committee—George Brown, of Brooklandwood, Baltimore county.

Fruits and Ornamental Trees, Shrubs and Plants.

For the best and largest collection exhibited, $5

Awarding Committee.—Col. Edw'd Wilkens, Kent Co., Gen. G. W. Hughes, Anne Arandel county, John M Orem, G. G. Presbury, Jr., and A. Pracht, Baltimore city.

American Wines and Cordials.

For the best half dozen dry Wine of any kind, $5
2d do do do 3
For the best half dozen Sparkling Wine of any kind, 5
2d do do do 3
For the best half dozen Sparkling Catawba, 3
do do Dry do 3
do do Norton's Virginia, 3
do do Wine of any kind, made by exhibitor from grapes grown by himself, 5
For the best bottle of home-made Cordial, 3
do do do do Bounce, 3
do do do do Wine, 3

Awarding Committee.—J. Hanson Thomas, Werner Dressel, Frank Newcomer. F. B. Loney, C. Hughes Armistead, Robert Gilmor, Robert Lehr.

Domestic and Household Manufactures.

For best Quilt, $2
2d do 1
For best pair home-made Blankets, 3
2d do do do 2
For the best home-made Carpet, 2
do pair fine Woolen Knit Long Hose, 1
For the best pair coarse Woolen Knit Long Hose, 1
For the best home-made Shirt, 2
2d do do 1
For the best Hearth Rug, 3
do pair Woolen Mittens, 1
do Woolen Knit Half Hose, 1
do specimen of Worsted Work, 1
do do Embroidery, 1
do Counterpane, 2
2d do 1
For the best artificial Flowers of Wax, 1
do Fruit of Wax or other material 3
do home-made Soap, 1
do do Bread, 2
2d do do 1
For the best home-made Pound Cake, 2
2d do Sponge do 2
For the best specimen of Pickles, 1
do do do Preserves, 1
do do do Fruit Jelly, 1
do do do Apple Butter, 1

[Discretionary premiums of $1 may be awarded to meritorious articles not enumerated in the last above list.]

Awarding Committee.—Mrs. Oden Bowie, Mrs. R. T. Banks, Mrs. John Merrymen, Mrs. Wm. R. Devries, Mrs. George H Kyle, Mrs. Alexander Brown, Mrs. Geo. Small, Mrs. George Patterson, Carroll county. Martial to the Committee—Gen. John Ellicott.

Class VII.

Implements and Machines.

Division No. 1.

For best one horse Plough for general use, $3
do two do do do 4
do three do do do 5
do Plough for new or rough land, 3
do Subsoil Plough, 5
do Hillside do 3
do Gang do 3
do Sulky or Wheel Plough, 5
do One horse Plough for Vegetables, 3
do Hand Plough, 1
do Potato Plough or Digger, 3
do Corn Cultivator, 3
do Tobacco Cultivator, 3
do Horse Hoe, 2
do Thill Horse Hoe, 2
do Vegetable Hand Cultivator, 1
do Clod Crusher, 5
do Field Roller, 5
For the best Grain Drill, 5
do do do with Guano and Seed attachment, 10
For best Broadcast Sower for horse power, 5
do do do hand do 2
do Corn Planter for horse power, 3
do do do hand do 2
do Garden Seed Sower, 2
do Potato Planting Machine, 3
do Lime or other Fertilizer Broadcast Spreader, 5

Awarding Committee.—Richard F. Maynard, Baltimore county, Augustus Shriver; Carroll County, Wm. T. Preston, Frederick county, Samuel Kirk, Balimore city, Henry A Silver, Harford county, Col. R. H. Dulany, Va., Richard C. Hollyday, Talbot county.

Division No. 2.

For the best machine to Thresh and Clean at one operation, for from 6 to 10 horses, $15
For the best machine to Thresh and Clean at one operation, for from 2 to 6 horses, 10
For best Threshing Machine without Separator, 5
For best Straw Carrier Attachment, for Thresher, 3
For best Sweep Horse Power, for from 6 to 10 horses, 10
For the best Sweep Horse Power, for from 4 to 6 horses, 5
For the best One Horse Railway Power, 3
do Two do do 5
For best Mowing Machine, for 2 or more horses, 10
For best Mowing Machine, for 1 horse, 5
do do do do for Lawns, 5
For best Mowing Machine, hand power, for Lawns, 3
For the best Combined Reaping and Mowing Machine, 20
For the best Combined Reaper and Mower with Self Raking or Dropper Attachment, 15

For the best Machine for Reaping and Binding simultaneously, $15
For the best Hay Tedder, 5
do Sulky or Wheel Horse Rake, 5
do do Revolving Horse Rake, 3

Awarding Committee.—Stephen T. C. Brown, Carroll county, Edwin Scott, Baltimore county, Daniel Jenifer, Baltimore, Henry Devries, Marriotsville, Carroll county, Thomas L. Worthington, Baltimore county, Luther Giddings, Anne Arundel county, Henry Davis, Oakland, Alleghany county.

Division No. 3.

For the best Grain Fan, $5
do Revolving Screen for cleaning grain, 3
For the best Corn Sheller for Horse Power, 5
For the best Double Spout Corn Sheller, 4
do Single do do 3
do Hay, Straw and Stalk Cutter for Horse power, 8
do do do Hand or Horse power, 5
2d do do do 3
For best Hay and Straw Cutter by hand power, 5
For the best Vegetable or Root Cutter, 2
do Horse Hay Fork, 5
do 4 Grain Cradles, 3
do 4 American Grain and Grass Scythes, 3
do ½ dozen Hand Hay Rakes, 3
do ½ do Garden Rakes, 2
do ½ do Pitchforks, 2
do ½ do Forks for digging, 2
do ½ do Long Handled Shovels, 2
For the best Briar or Bramble Scythe, 1

Awarding Committee.—David Brumbaugh, Hagerstown, James F. Lee, Finksburg, Carroll county, Gen. Anthony Kimmel, Linganore, Frederick Co., Horace Beck, Kent county, Greenbury Watkins, Prince George's Co, Henry Davis, Oakland, Alleghany county.

Division No. 4.

For the best Hay Press by horse power, $8
do do do hand do 8
do large Cider and Wine Press, 8
do small do do 5
do Cheese Press, 3
do Cotton Gin, 5
do Smut Machine, 3
do Clover Huller and Cleaner, 3
do Stump Puller, 5
do Churn, 3
do Bee Hive, 4
do Platform Scales, 4
do Ox Yoke and Bows, 2
do Dumping Wagons, 3
do Wagon Brake, 2
do Self-Opening and Shutting gate, 10
do Farm Gate, 3
do Portable Fence, 2
do Milk Can, 3
do Set American made Pruning Tools, 2
For the best Set Ditching Tools, 3
do Machine for grinding Reaper Knives, 3
For the best Road Scraper, 2
do Stone Breaker for Roads, 10

Awarding Committee.—Gen. Tench Tilghman, Talbot county, Col Chapman Billingslea, St. Mary's county, Dr. Richard Mackall, Calvert county, W. J. Aydelotte, Worcester county, Col. William Richardson, Buckeystown, Frederick county, George H. Merryman, Dulany's Valley P. O., Baltimore county, Oliver Wadlow, Freedom, Carroll county.

Division No. 5.

For the best Portable Steam Engine, $25
do do Farm Mill, 10
do Saw-Mill for Lumber, 15
do do for firewood, 10
do Stave Machine, 5
do Shingle Machine, 5
do Drain Tile Machine, 5
do Drain Tile in assorted samples, 3
do Sorgho Mill for large crops, 10
do do for small do 5
do Sorgho Evaporator, 5
do Corn and Cob Mill, 5
do Farm Pump for hand power, 3
do do wind power, 5
do Water Ram or other Water Elevator by water power, 5
do machine for drilling stone, 8
do Cooking Stove, 5
do Washing Machine, 5
do Clothes Wringer, 3
do Refrigerator, 3
do Sewing Machine, 5

Awarding Committee.—David L. Bartlett, Baltimore city, James T. Ellicott, St. Mary's Co, Richard F. Maynard, Baltimore county, Henry B. Hazlehurst, Baltimore city, John Bosley of Wm Baltimore county, Franklin Whitaker, Bel Air, Harford county, G. Hunt, Baltimore city.

Discretionary Premiums.

Discretionary Premiums to the amount of $150 may be distributed at the discretion of the Committee appointed therefor, for any especially new and valuable improvements in machines.

Awarding Committee.—Chauncy Brooks, Governor Ross, Delaware, John Gassaway, Darnestown, Montgomery Co., Decatur H Miller, Baltimore city, Dr. Bowen, Mt. Washington, Jesse Slingluff, Baltimore county, Fitzhugh Coyle, Washington city, D. C.

Class VIII.

Harness and other Leather Manufactures.

For the best Pair of Plough Gears, $5
2d do do do 3
For best set Single Wagon Harness for farm, 3
2d do do do 2
For best set Cart Gears, 3
For best set Double Farm Wagon Harness, 5
2d do do do 3
For best set Carriage Harness, 5
2d do do 3
For best set Buggy Harness, 3
do Farm Saddle, 3
do Man's Saddle and Bridle, 5
2d do do 3
For best Lady's Saddle and Bridle, 5
2d do do 3
For best Traveling Trunk, 3
For best lot Wagon Whips, not more than 6, 2
do Carriage do do 4
For best Gentleman's and Lady's Riding Whips, not more than 6, 2

Awarding Committee.—Alfred Jenkins, Benjamin Deford, Walter Dorsey, Howard county, Henry Tyson, Rob't Moffatt, William Wilkens, Joseph Renshaw.

RULES AND REGULATIONS.

1. The Show Grounds will be open for the reception of Animals and Articles designed for exhibition, on SATURDAY, 23d, after 9 o'clock, A. M., and on MONDAY, 25th October, after the same hour. But all Animals and Articles intended for exhibition must be entered and ticketed at the Business Office, before being carried within the Society's enclosure.

2. No Animals or Articles (unless by special permission of the Executive Committee previously obtained) will be entered or admitted after 9 A. M. on Tuesday, 26th October, except Bread, Cakes, Butter and Cheese and Slaughtered Mutton, which if previously entered, may be introdnced as late as noon on Tuesday, 26th of October.

3. All members of the Society, and all who shall become members previous to or at the Fair, will be furnished with Tickets, with four Coupons attached. Each one will admit one person once. Tickets to admit a single person 25 cents—no half tickets to be sold. Admission to Stand 50 cents.

4. All Male Exhibitors must have previously become members of the Society, by the payment of $1, and subscription to the Constitution, But Ladies shall be exempt from this charge, and may exhibit articles of their own handiwork free from any charge therefor, or for their own admittance during the Exhibition.

5. These Regulations must be strictly adhered to, otherwise the Society will not be responsible for the omission of any animal or article on the Lists.

6. No animals or articles entered for exhibition can be taken away before the close of the Fair, except by permission of the Executive Committee, and no premium will be paid on animals or articles removed in violation of this rule.

7. Animals and articles entered for exhibition will have cards attached with the number as entered at the business office, and exhibitors should in all cases obtain their cards previous to placing their stock or articles on the Show Grounds.

8. The Judges on Animals will have regard to the symmetry, early maturity, size and general qualities characteristic of the breed which they judge. They will make due allowance for age, feeding and other circumstances on the character and condition of the animals. They will not give encouragement for overfed animals. They will not award premiums for Bulls, Cows or Heifers which shall appear to have been fattened for the butcher; the object being to have superior animals of this description for breeding.

9. No person directly or indirectly interested will be allowed to serve as Judge—and the Executive Committee will quash the awards in every case where a person interested has served as a Judge, or has attempted to influence or sway the action of the Judges.

10. The Judges will be expected in all cases, in making their reports to give the reason of their decision, embracing the valuable and desirable qualities of the animals or articles to which premiums are awarded.

11. When anything is exhibited to the Judges which they shall deem meritorious, but beyond their power to award a premium, they will furnish a note of the same to the Committee on Class 7, for their consideration and action.

12. No animal or article can take more than one premium, except as hereinafter specified.

13. Horses which take any of the regular premiums of the Society, may likewise compete in the trials of speed.

14. Cattle which simply take regular premiums of the Society, may likewise compete as members of Herds, for Herd premiums.

15. A premium will not be awarded when the animal or article is not worthy, though there is no competition.

16. All animals or articles competing for the same premium must be brought together as the Judges may appoint; and the Judges may require, in their discretion, exhibitors to change the position and bring in proximity animals and articles concerning the comparative merits of which they may feel in doubt.

17. Any one who may not previously have joined the Society paying $1 to the Treasurer or his authorised representatives, at the office on the Grounds or at the Society's Room, will be admitted to membership, and be entitled to all the privileges thereof for the year 1869.—The Treasurer and his deputies will furnish Certificates of Membership to all who shall pay their subscriptions in full or their enterance fee as above stated—but no credit will be allowed for subscription or entrance, and no person will be permitted to vote or enjoy the other privileges of a member, unless his Certificate give evidence that he has duly joined the Society and is not in arrears.

18. Imported animals can compete only for the premiums offered for such.

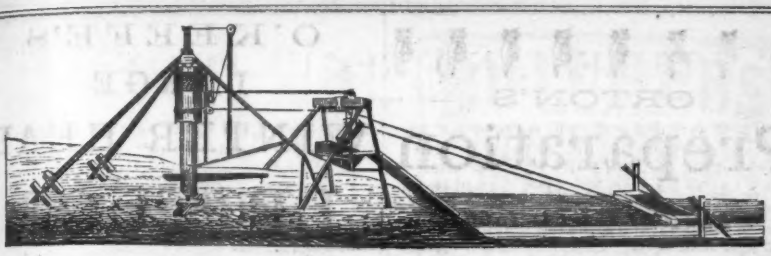
19. All persons visiting the exhibition must obey the directions of the Officers of the Society, upon pain of expulsion and forfeiture of all the privileges for which they may have previously paid.

20. Every citizen of Maryland, who consents to act as Judge, is expected previously to become a member of the Society.

Food will be allowed at the following value per head for each variety of stock;

Horses	$2 00
Cattle	1 50
Sheep	50
Hogs	1 00

Hay and Straw in addition to the above.



☞ BRYAN'S AGRICULTURAL MARL AND MUCK LIFTER,

A STRONG AND DURABLE MACHINE, WHICH CAN BE WORKED BY ORDINARY FARM HANDS.

To Raise the Deposit from the Bottom of Ravines, Coves, Creeks, Rivers or other places inaccessible to teams.

It works with facility 170 feet from the capstan; will lift any marl clean of rocks, carting 125 to 150 loads a day.

The late M. Tilghman Goldsborough, Esq., of Talbot Co., Md., writing under date of 20th January, 1860, says in regard to this machine:

"I had it worked in the presence of several gentlemen, just to see the 'modus operandi,' and to be satisfied of the power and efficiency of the machine; and two mules of medium size appeared to have sufficient power to deliver on the shore a bucket full, equivalent to a cart load, in about six minutes. The mud at that trial was dropped on the creek bank. The mules were awkward and shy of the strangers present, and the hands were awkward at the novel occupation. We brought on shore about fifteen cart loads, and I feel entirely confident that I shall not be disappointed in the machine when it is put at full and regular work. Some of our farmers who have taken advantage of low tides and ice in the creeks to obtain small quantities of this mud, think it a very valuable manure; indeed that opinion appears to be universal here, but as the machine is of recent invention, and only a few have been erected, there has not been time to test the actual value of the mud as a fertilizer."

Having tested the machine, he writes under date of 27th July, 1860:

"Having successfully tested the working of your Mud Lifter, I have the further pleasure of testifying to the efficacy of the mud. You may remember that in December last, when the machine was first erected, we lifted some twenty loads of mud with it from the bottom of a salt water cove. This was acted on by the frost, and this spring was put on a point of thin land, in my corn field, where I never have had a vigorous crop of any sort, but now the land on which the mud was applied has a dark green, and vigorous growth of corn, entirely superior to the adjoining land, although the land undressed with mud is rather better, and both had the same dressing of shell marl. In this case the mud has had most unmistakably a profitable effect The land is a yellow clay loam."

For particulars, address

BRYAN & BROTHER,

Care of "American Farmer," Baltimore, Md.

july-

GLOBE MUTUAL LIFE INSURANCE CO.

No. 259 Broadway, New York.

PLINY FREEMAN, President.
LORING ANDREWS, } Vice-Pres'ts.
J. A. HARDENBERGH, }
HENRY C. FREEMAN, Secretary.

Assets, Jan. 1st, 1869..... $1,641.907,55
Annual Income..... ..... 887,287.40

The Globe Mutual Life Insurance Company commenced business in June, 1864; has issued up to Feb. 1st, 1869, 13,923 Policies, insuring $36,613.369,00,

Losses paid amounting to $380,300,00,

The Superintendent of the Insurance Department of New York calls the President of this Company "that Experienced Veteran in the business of Life Insurance," to which he is entitled, if being longest connected in the management of the business is sufficient title. He was the originator of the NON-FORFEITING system, under which there could have been NO WHOLESALE confiscation of SOUTHERN POLICIES by Northern Companies during the war,

The GLOBE makes no extra charge for Southern residence, and in case of death by BATTLE or DUEL, pays the NON-FORFEITING VALUE of its Policies, or returns all the premiums received.

Policies issued by this Company, by a special deposit with the Insurance Department, bear the official seal of the State of New York, which becomes responsible for the amount insured when required.

Policy Holders participate in the profits of the Company. The insured can travel at all seasons of the year in any part of the United States or Europe. july

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CANFIELD, BRO. & CO.,

229 Baltimore st., Baltimore,

IMPORTERS AND DEALERS IN

FINE WATCHES, DIAMONDS and FINE JEWELRY,

STERLING SILVER WARE,

TRIPLE SILVER PLATED WARE,

A full stock, Spoons and Forks, Cutlery, Clocks, Bronzes and Fancy Goods. Agents for Waltham American WATCHES, in Gold and Silver Cases. Watches Repaired. july-6t

---

50,000 Maria Perla de las Antillas Havana Concha Cigars.

Packages of 1000. Manufactured of genuine Vuelta Abajo Tobacco of our own importation. A full flavored Havana Cigar. Well seasoned. Sample boxes of 100 sent by Express at $8, C. O. D., free of expense.

G. H. BOLENIUS, 202 W. Pratt street,
july-1y P. O. Box 1373, Baltimore, Md.

Chester White and Suffolk Pigs.

POULTRY—Improved and Premium Fowls for sale. Send stamp for beautiful illustrated Circulars.

THOS. B. SMITH, Stony Brook,
july-1t Box 9, Long Island, N. Y.

ORTON'S
Preparation

ESTABLISHED 1866.

The Appetite for Tobacco Destroyed!

LEAVE OFF CHEWING AND SMOKING THE POISONOUS WEED, TOBACCO!

One box of Orton's Preparation is warranted to destroy the appetite for Tobacco, in any person, no matter how strong the habit may be. *If it fails in any case the money will be refunded. It is perfectly safe and harmless in all cases.* It is almost impossible to break off the use of Tobacco by the mere exercise of the will. Something is needed to assist nature in overcoming a habit so firmly rooted. With the help of the Preparation, there is not the least trouble. *Hundreds* have used it who are willing to bear witness to the fact, that Orton's Preparation completely destroys the appetite for Tobacco, and leaves the person as free from any desire for it, as before he commenced its use. The Preparation acts directly upon the same glands and secretions affected by Tobacco, and through these upon the blood, thoroughly cleaning the poison of Tobacco from the system, and thus allaying the unnatural cravings of Tobacco. No *more hankering for* Tobacco *after using Orton's Preparation.* Recollect *it is warranted*

The time taken to allay all desire for Tobacco by the use of the Preparation varies *slightly* in different persons, the *average* time being about *Five* days. Some have no desire for Tobacco whatever after using the Preparation *Two* days.

The *Health* and *Purse* of every Tobacco user in the country calls loudly, ABANDON THE USE OF TOBACCO.

RECOMMENDATIONS.

The following are a few selected from the multitude of recommendations in our possession:

We, the undersigned, hereby certify that we have used Orton's Preparation for the purpose of destroying the appetite for Tobacco, and can assure those who are suffering from this habit that Orton's Preparation will certainly destroy the appetite for Tobacco *quickly* and *permanently*, and without creating any bad effect upon the health, and without creating an appetite *either for the Preparation or any Substitute:*

Rev. S. M. ANDREWS, Colebrook, N. H.; Rev. E. R. CROUSE, Tiffin, Ohio; Rev. H. LONGBRAKE, Leary, Ohio; Rev. ISAAC CROUSE, Marion, Ohio; JOHN EPPNER, Marion, Ohio; K. W. LEIGHTON, Portland, Maine; E. W. ATKINS, Knoxville, Tenn.; WALES BARRETT, Lamoille, Illinois; J. P. DAY, Rarlton, Illinois.

☞ *Beware of Counterfeits and all articles purporting to be like this, of the same name or otherwise. The great popularity of Orton's Preparation has induced unprincipled persons to attempt palming upon the public counterfeit and inferior articles. Purchasers will please order directly from the proprietor, or his duly authorized Agents.*

The price of Orton's Preparation is $1.00 per box, or six boxes for $5.00, sent by mail to any part of the country, *securely sealed from observation*, with passage paid on receipt of price.

How to Send Money by Mail.—Enclose the amount in a letter, seal carefully, register the letter and take a receipt for it of your Post Master. Money sent by mail as above directed at my risk.

Address E. DOUGLAS, Proprietor,
Box 1572, Portland, Maine.

july-3t PATENT APPLIED FOR.

O'KEEFE'S LARGE WINTER HEAD
LETTUCE.

Messrs. M. O'Keefe, Son & Co., the well known and reliable Seed Importers, Growers, and Florists, Rochester, N. Y., having grown and thoroughly tested this new variety for the past three years, now offer it to the public as a FINE AND VALUABLE acquisition for both the market and private garden, as it is ready for use fully

THREE WEEKS EARLIER

Than any other variety of Lettuce, except that grown under glass. *It will stand the Winter without protection in the coldest of our Northern climates.* It forms very large, solid, exceedingly tender, greenish yellow heads, the outside leaves being of a brownish tinge. Orders for Seed will be received now, to be filled on August 1st, and thereafter, in regular rotation, by mail, in sealed packages, at 50 cents each, and can only be had GENUINE AND TRUE at their establishment. Order immediately of

M. O'KEEFE, SON & CO.,

july-3t ROCHESTER, N. Y.

SORGHUM.

CLOUGH'S NEW REFINING AND DEODORIZING PROCESS removes the offensive odor and taste from Sorghum; makes a delicious table sirup; saves labor in manufacturing; removes the gummy obstruction to granulation; is a boon of incalculable value to the great Sorghum interest,

"It knocks the wild Sorghum taste all out."—Hon. JOHN H. BRANCH, Branch Hill, O.

"Its effect is really magical."—Major TOM BYNUM, Baton Rouge, La.

"Produces a decided disposition to crystalization. Most of the lots I refined readily crystalized as they came from the evaporator."—R. E. KINGSLEY, Varnall's Station, Geo.

"No. 1 as compared with bone coal refining."—E. S. RICKER, Locust Corner, O.

"Comes nearest to maple of anything I ever saw."—T. H. BAILEY & SON, Adrian, Mich.

Refining materials enough to refine 20 gallons sirup with full directions for working experimentally, sent by express on receipt of $1.50. Responsible agents wanted. Send for Descriptive Circulars. Address

CLOUGH REFINING CO.,

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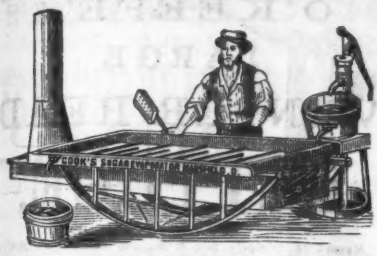
LISTEN TO THE MOCKING BIRD.—The Prairie Whistle and Animal Imitator can be used by a child. It is made to imitate the songs of every bird, the neigh of a horse, the bray of an ass, the grunt of a hog; birds, beasts, and snakes are enchanted and entrapped by it. Is used by Dan Bryant, Charley White, and all the Minstrels and Warblers. Ventriloquism can be learned in three days by its aid Sent anywhere upon receipt of 25 cts.; three for 50 cts.; $1.25 per dozen.

jy-3t T. W. VALENTINE, Box 372, Jersey City, N. J.

VINEGAR. HOW MADE FROM CIDER, WINE, Molasses or Sorghum, in 10 hours, without using drugs For terms, circulars, &c., address F. I. SAGE, Vinegar Maker, Cromwell, Conn. jy-1t



THE ONLY RECOGNIZED STANDARDS IN CANE MACHINERY are the **Cook's Evaporator** and the

VICTOR CANE MILL.

17,000 COOK'S EVAPORATORS are in use, and 10,000 VICTOR CANE MILLS, *all warranted.*

AWARDS.

Cook's Evaporator, 1st Premium at 60 State Fairs!
Victor Cane Mill, (introduced in 1863,) First Premium at 37 State Fairs!
Both First Premiums at Louisiana Fair, New Orleans, 1868, for WORKING SOUTHERN CANE.
All attempts thus far to equal these unrivaled machines by other contrivances, have

SIGNALLY FAILED ON TRIAL.

Farmers can't afford to risk crops of Cane on Mills that BREAK or CHOKE, or Evaporators that do SECOND CLASS WORK and ONLY HALF ENOUGH at that.

"While scores of new fangled inventions have come up, had their day, and subsided, the 'COOK" goes right along, constantly increasing in reputation."—PRAIRIE FARMER.

"Successful trial for years has given the COOK EVAPORATOR and VICTOR CANE MILL a decided reputation for superior excellence; we can heartily recommend them."—AMERICAN AGRICULTURIST.

The *Sorgo Hand-Book* and Descriptive Circulars sent free.

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Manufacturers of the
VICTOR GRAIN DRILL AND BUCKEYE THRESHER.
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Tobacco Firing Apparatus.

THE ONLY SUCCESSFUL ONE

Ever made and sold. Parties desirous of availing themselves of the great advantages of this invaluable apparatus for *saving* and *advancing the price* of their crop, will bear in mind, that to those making early application we will sell *at a reduced price.* Remember, this is not a *Common House Furnace,* but *made especially* for the purpose designed.

BIBB & CO.,
BALTIMORE STOVE HOUSE,
39 *and* 41 *Light street, Baltimore, Md.*

Cook Stoves, Ranges, Agricultural Cauldrons, &c., &c.
A large variety always on hand. july-1t

FOR SALE.

A trio of "WHITE FACED BLACK SPANISH" FOWLS. Price $10.

Boxed and delivered at Express Office.
Address J. E. B., American Farmer Office,
july-1t Baltimore, Md.

july-3t

THE
Piedmont Land Agency
OF
VIRGINIA.

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CRESYLIC SOAPS
AND
Saponaceous Compounds,
PATENTED.

Manufactured under License solely by

Jas. Buchan & Co.,
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And for sale by Druggists, Grocers, Seedsmen and Dealers.

For the first time available compounds of this acid are offered to the Horticulturist. They are so destructive of fungus and insect life, and so obnoxious to the latter, that both the Horticulturist and the Farmer will understand their value.

The Acid itself will not COMBINE with water, and if mixed mechanically and syringed upon plants, the water runs off, leaving the acid, which scorches and destroys the leaves. Hence the necessity for these Compounds, which not only spread freely over the leaf, but are lasting in its effects. The compound known as

PLANT PROTECTOR,

Is a soluble Soap, easily dissolved in hot water, to which cold water may be added until of the desired strength. For trees, and strong growing plants in open air, 5 lbs. of the PROTECTOR to 50 or 100 gallons of water will, as a rule, prove strong enough. For use in-doors a weaker solution will suffice.

Sold in	1 lb.	Canisters,	at 50 Cents.
	3 "	"	$1.00
	5 "	"	1.25
	10 "	"	2.25
	50 lb.	Kegs, at	10.00

Larger packages put up, if ordered, and at less price.

Applied undissolved to the stems of young trees, it will afford complete protection from rabbits, mice, squirrels, &c.

Laundry and No. 1 Soaps,

For use in Scrubbing and in the Laundry.

Carbolic Disinfectant Soap.

For convenient use in washing horses, dogs, cattle, &c., destroying fleas and other vermin, and completely protecting from flies; curative of sores, scratches, and chafes of all kinds. 40 cents per lb.

SHEEP DIP.

For curing scab, and destroying insects on Sheep. Put up in same form, and at same price as PLANT PROTECTOR.

FOOT ROT OINTMENT.

A certain cure for this dangerous pest, in 3 lb. Canisters, at $1.

CRESYLIC SOFT SOAP.

For floors, bedsteads, jails, hospitals, &c., where insects of any kind are troublesome, or where foul odors, or infectious and malarial diseases prevail. In same package and at same price as the PROTECTOR.

Also Staple Soaps of all grades.

FRANK LEWIS,
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WEST'S
Improved
Double-Acting, Anti-Freezing,
FORCING AND LIFTING
PUMP.
ADAPTED FOR
Shallow or Deep Wells, Cisterns, and House Purposes;
For Filling Tanks and Reservoirs, &c., &c.

Warranted to be the cheapest and most durable Pumps in use.

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Received at the State Fairs in New York, Baltimore, St. Louis and Richmond.

Circulars and Price-Lists sent by mail on application. A. REUTER & SONS,
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Paints for Farmers and others.

The Grafton Mineral Paint Co. are now manufacturing the Best, Cheapest and most Durable Paint in use; two coats well put on, mixed with pure Linseed Oil, will last 10 or 15 years; it is of a light brown or beautiful chocolate color, and can be changed to green, lead, stone, drab, olive or cream, to suit the case of the consumer. It is valuable for Houses, Barns, Fences, Carriage and Car makers, Pails and Wooden-ware, Agricultural Implements, Canal Boats, vessels and Ships' Bottoms, Canvas, Metal and Shingle Roofs, (it being Fire and Water proof,) Floor Oil Cloths, (one Manufacturer having used 5,000 bbls. the past year,) and as a paint for any purpose is unsurpassed for body, durability, elasticity, and adhesiveness. Price $6 per bbl. of 300 lbs., which will supply a farmer for years to come. Warranted in all cases as above. Send for a circular which gives full particulars. None genuine unless branded in a trade mark, Grafton Mineral Paint. Persons can order the Paint and remit the money on receipt of the goods. Address,
feb 6t DANIEL BIDWELL, 254 Pearl St., N Y.

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York, Pennsylvania.

Wholesale manufacturers of Cultivator Teeth, Plow Steel, Agricultural Castings, Horse Powers, Threshing Machines, Cultivators' Steel Plows, Plow Handles, and standard agricultural implements generally.

Especial attention, of the trade and farming community, called to our celebrated Iron Geared *Horse Power*, largely used in the South for ginning cotton, threshing grain, sawing wood, and propelling mills. It is warranted stronger, more durable, and lighter of draught than any other in the Market.

PLOW HANDLES.

Having improved machinery for manufacturing Plow Handles on the largest scale, we can supply the trade at the shortest notice with all sizes of No. 1 Plow Handles.

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OF RICHMOND, VA. This able monthly and
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Together for $3.50 per annum.

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(SUCCESSORS TO JOHN M. GRIFFITH & CO.)

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Call and examine their justly celebrated Buckeye Self-Discharging Wheel Horse Rakes,

WORLD Cut Gear

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Tornado Thresher and Cleaner, Carey and other Horse Powers, Bullard's HAY TEDDER, Swift's Lawn Mower, Hay and Cotton Presses, Alden's Thill Hoe and Cultivator, Tingley's Improved BUTTER CHURN, Cook's Sugar Evaporators, Victor CANE MILLS; Wheat and Guano Drills, best in use; STRAW CUTTERS, most improved kinds; CORN SHELLERS, by hand and horse power; Portable Cider and Wine Mills and Presses; Woodruff's Portable Barometers, Rundall's Horse HAY FORKS, Steel and Cast Iron PLOUGHS, Plough Castings, Plough Handles, HARROWS, CULTIVATORS, GRAIN CRADLES, English and American Mowing Scythes, Revolving Horse Hay Rakes; HICKORY HAND-RAKES of our own manufacture, warranted to be superior to any in the market.

Also, Clover and Timothy Seed, Orchard Grass, Kentucky Blue Grass, Herds Grass Seed, Oats, Corn, Potatoes, and a general assortment of GARDEN SEEDS and FERTILIZERS.

☞Send for Circular and Price List. je-2t

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CORNER CHARLES AND FAYETTE STREETS,

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LIFE SIZE PORTRAITS IN OIL AND PASTEL.

PHOTOGRAPHS FINISHED IN WATER COLORS, INDIA INK & CRAYON.

SPECIAL NOTICE.—By sending any old picture of a deceased friend and giving complexion and color of hair and eyes, we guarantee a satisfactory picture in any of the above styles.

Our Staff of Artists is unequalled in this country, in point of talent and numbers.

A Fine Gallery of Paintings in connexion. Open Free. mar 6t

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MANUFACTURER OF

TUBULAR DRAINS

In Glazed Stoneware.

—ALSO—

DRAIN TILES.

LOCUST POINT,

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$10.00 PER DAY GUARANTEED

Agents to sell the HOME SHUTTLE SEWING MACHINE. It makes the LOCK STITCH, ALIKE ON BOTH SIDES, has the under-feed, and is equal in every respect to any Sewing Machine ever invented. Price $25. Warranted for 5 years. Send for circular. Address JOHNSON, CLARK & Co., Boston, Mass., Pittsburgh, Pa., or St. Louis, Mo. june 3t

DRAINAGE.

A superior lot of DRAIN TUBES and TILES for sale at wholesale prices. Address

AMERICAN FARMER BUSINESS AGENCY,

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THE

Old Dominion

LAND AGENCY,

WEDDERBURN, SHUTTS & CO.

OFFICES:

PHŒNIX HALL, corner King and Royal streets,
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ROOM No. 1 INTELLIGENCER BUILDING, cor. 7th and D sts.,
WASHINGTON, D. C.

Has for sale 100,000 Acres of improved and unimproved Land in Virginia and Maryland.

Send for Catalogue of Lands.

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AGRICULTURAL

STEAMER,

FOR

FRUIT GROWERS,
STOCK FEEDERS,
DAIRYMEN, &c.

This Steamer has now been in use for several years, is perfectly safe, and a most complete invention for

Cooking Food for Stock, Scalding Hogs,

And for GENERAL CULINARY PURPOSES.

Mr. S. L. Hyatt, of Huntingdon, Pa., writes: "I use my Steamer chiefly in the canning of fruit; it answers the purpose to my fullest expectation, * * * and would not be without one at double its cost."

Messrs. Frank L. Morling and Chas. W. Beatty, of this city, have each a Prindle Steamer in use "for six months past," of which they speak in the highest terms as to its great value for cooking, steaming and boiling purposes, and say they would not be without them.

The Steamer is for sale by

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31 *Light street, Baltimore.*

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Have a large and carefully selected stock of pure Drugs and Chemicals—also a large assortment of TRUSSES, Abdominal Supporters, Shoulder Braces, Eng. Bougies and Catheters, Suspensary Bandages, Gum Elastic and Glass Pessaries, Glass, Metal and Rubber Rectum and Vaginal Syringes, and Hyperdermic Syringes—to which they invite the attention of Physicians and the afflicted. Also the following

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Direct from the SPRINGS, to which they are constantly adding other Waters of any merit, as they are introduced, and consumers can rely upon their freshness and purity:

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The only Independent Tooth Rake in the country; each Rake has 20 Steel Teeth. Farmers and dealers would do well to send their orders early.

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WORLD RENOWNED PREMIUM

GRAIN DRILL,

WITH THE

IMPROVED GUANO ATTACHMENT AND GRASS SEED SOWER.

Patented April 22, 1856.

Re-issued May 18, 1858.

Patented Aug. 18, 1858.

New Patent Mar. 19, '67,

OF THE

CONTINUOUS

Grain Distributor.

The Desideratum of Seeders!

Perfect in Mechanical Construction!

Perfect in its Performance of Work!

Sowing all grains, from the coarsest Marrowfat Peas to the finest kerneled, *with accuracy*. Thistle balls and dirt do not clog it. Seeding an even continuous stream through each tube; performing equally well up hill or down, side hill or level.

No Bunching of Grain!

No Liability to Get Out of Order or Broken!

Built as a plain Grain Drill or with Compost or Seed Attachment.

PRICE OF THE BICKFORD & HUFFMAN DRILL,

Delivered on Boat or Cars at Baltimore.

8 Tube Grain Drill	$85 00
9 " " "	90 00
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9 " " " " " " "	130 00
Grass seed attachment to either of the above	10 00

TERMS CASH—or endorsed Notes, due in four months, with interest.

☞ Purchasers in all cases pay freight from Baltimore.

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WATCHES, FIRST CLASS CLOCKS,
Silver & Plated Ware, Table Cutlery,
GOLD EAR RINGS, BREASTPINS,
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And every kind of New EUROPEAN GOODS.

With an Agent residing in Paris, I can, at my Store, CORNER OF WATER AND CALVERT STREETS, supply Dealers at all times with new patterns; and where all kinds of Watches and Jewelry will be repaired.

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LEVER POWERS, for four or six, and eight or ten horses Wheeler's THRESHERS and CLEANERS thresh and clean the grain fit for market. Are used with two or three Horse Railway Power, or four or six Horse Lever Power.

The celebrated GEISER THRESHER and SEPARATOR or CLEANER, used with eight or ten Horse Lever Power, Has no apron or sieves; self-regulating blast, and cleans the grain fit for market without waste. Is the best machine in the world.

Shingle Machines, Atlantic Cotton Gin, Wood-Sawing Machines, Horse Forks, &c.

All machines made by us guaranteed as represented. The best machines are cheapest to buy. Address

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Shell Lime,

FOR BUILDING OR AGRICULTURAL PURPOSES,

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AT MY KILNS,

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NEAR ROSS STREET.

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MANUFACTURED BY

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MADE FROM

Super-Phosphate of Lime, Ammonia & Potash.

WARRANTED FREE FROM ADULTERATION.

This Manure contains all the elements to produce large crops **of all kinds, and** is highly recommended by all who used it, **also** by distinguished chemists who have, by analysis, tested its qualities.

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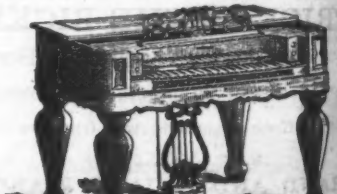

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COAT.

Length.....from 1 to 2 and 3	Around the Waist under the Coat.....8
Arm.....4 to 5 and 6	Height ft in.
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Length, from 1 to 13, with last two Coat Measures.

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Outside Seam from top of Waistband..10	Around the Waist under the Coat.....8
Inside Leg Seam from Crotch.....12	Around the Hips under the Coat.....14

SHIRTS.

Around the Neck under Cravat, 16, with all the Coat Measures.

Gentlemen at a distance can order their Clothing by the above system of measurement, which can be taken by any one, whether a tailor or not. All orders will have prompt and careful attention, and be filled with strict reference to the well-earned reputation of the House for TASTEFUL and SUBSTANTIAL Clothing. Prices guaranteed to be lower than Merchant Tailoring Establishments generally. Samples of Materials, with prices sent by mail, when desired.

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Opposite Adams' Express Office,

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GENTLEMEN'S FURNISHING GOODS.

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The BEST AND CHEAPEST BOX IN USE. Neat, strong, and well ventilated. Put together without tacks. Pint and quart size. Also a new style of Berry Basket very neat. Peach baskets. Grape boxes. &c., &c.

At the factories of the Rochester Grape and Berry Box Co., Rochester, N. Y., and Benton Harbor, Mich.

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(Gold Medal awarded in 1865 by the Maryland Institute.

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$20 A DAY to Male and Female

Agents to introduce the BUCKEYE $20 SHUTTLE SEWING MACHINES. Stitch alike on both sides, and is the only LICENSED SHUTTLE MACHINE in the market sold for less than $40. All others are infringements, and the seller and user are liable to prosecution and imprisonment. Full particulars free. Address W. A. HENDERSON & CO., Cleveland, Ohio. may-3t

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This school under the direction of the Sisterhood of the Good Shepherd, is in a healthful and delightful part of the city, facing the Southwest corner of Franklin Square. The young ladies are under the constant supervision of the Sisters, and the religious teaching is in the hands of Rev. C. W. Rankin, Rector of St. Luke's Church.

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Belmont Stock Farm.

I am breeding thorough bred Horses, the Imported Percheron Norman Horses, and the Black Hawk Branch of the Morgan Stock, and have geldings of the latter for sale.

My cattle are pure-bred Short-Horns, and have them of all ages for sale.

Also Albemarle Improved Hogs, (a cross of Chester White and Kentucky Woburn,) better suited to rough fare, and the Chester White's the best, when well cared for.

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GROWERS AND IMPORTERS OF

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HAND AND POWER CORN SHELLERS

OF DIFFERENT PATTERNS AND SIZES,

PLANTATION GRIST MILLS, all sizes,

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CORN & COB CRUSHERS & CORN MEAL MILLS Combined.

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This *Reaper* took the Gold Medal at the Great Field Trial held at *Auburn, N. Y.*, in July, 1866, as the best Self-Rake on the ground.

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This Mower we can recommend as the best in use.

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THE BEST IN USE.

SINCLAIR & CO'S IMPROVED CORN PLANTER,

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HORSE POWERS, all the different patterns and sizes,

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WARRANTED FREE FROM ADULTERATION.

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We are prepared to supply the farmers of Maryland and Virginia with *Bone Dust* which we warrant and guarantee to be free from ADULTERATION.

This Bone Dust is not so fine as our Bone Flour, but sufficiently fine to prove active on the first crop. It is prepared in New Orleans for our sales.

We have every cargo subjected to careful chemical analysis, and thus avail of the proper means of protection for ourselves and our patrons.

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FLOUR OF RAW BONE.

This article is warranted to be pure UNSTEAMED BONE, reduced to the FINENESS OF FLOUR. It retains all its animal matter and gluten, and is as quick and active in its effect as if dissolved with acid, and far more valuable, because it is ALL BONE.

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Keep constantly on hand a good stock of the most useful Implements and Machinery of every description. They continue to keep on hand the following valuable Machinery:

WESTINGHOUSE THRESHERS and CLEANERS,

Pelton's Horse Powers of the best make,

Bickford & Huffman's GRAIN & GUANO DRILLS,
THE BEST IN THE COUNTRY,

Novelty Horse Rakes on Wheels, very good,

The well known VAN WICKLE WHEAT FANS,

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Fresh and Genuine FIELD and GARDEN SEEDS.

FERTILIZERS, GUANOS, BONE DUST.

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